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UNIVERSITY OF WYOMING COOPERATIVE RESEARCH REPORT
TO THE BUREAU OF LAND MANAGEMENT

ANNUAL PROGRESS REPORT

1981 RESULTS

VOLUME I

PHENOLOGY STUDY UNIT

PHENOLOGY AND PRODUCTION STUDIES ON
SEMI-ARID SHRUB TYPES

SUBMITTED BY WYOMING AGRICULTURAL EXPERIMENT STATION
DECEMBER 1982

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PHENOLOGY AND PRODUCTION STUDIES ON
SEMI-ARID SHRUB TYPES[1]

1981 ANNUAL PROGRESS REPORT

VOLUME I: PHENOLOGY STUDY

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BY

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December 1982

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[1] Published with the approval of the Director, Wyoming Agricultural Experiment Station as Scientific Report No. 1199.

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SECTION I

Phenology Study

1981

Introduction

Little detailed phenology and productivity information is available for arid land species of the western United States. Phenological studies in terms of production and microenvironmental variations will provide information that can be used to increase the efficiency of Bureau decision making with respect to management alternatives. Phenology studies of dominant shrub and grass species will provide information relative to specific changes in environmental characteristics such as precipitation, and soil and ambient temperatures. Both basic scientific knowledge and more precise information relative to the Bureau's multiple resource management objectives will be available from this phenology study.

Artemisia tridentata, *Artemisia nova*, *Agropyron smithii*, and *Agropyron spicatum* are the major shrub and grass species in the intermountain region on semi-arid, low elevation grazing ranges of public land. These species are especially important in the semi-arid regions of the western half of Wyoming from the Montana border on the north and the Utah and Colorado borders on the south. Their importance in adjacent states is equally significant. The ecological divergence of these four species is great. They are found from high elevations to very low elevations and from mesic to xeric situations. Therefore, these four species, in the development of the cooperative research program between the Bureau of Land Management and the University of Wyoming, were selected for intensive studies, to determine interrelationships of phenology, production, and environmental characteristics. These kinds of data are of major importance to the Bureau for development of efficient and sound resource management decisions.

Intensive phenological studies were established in 1973 on 12 selected exclosure areas: Bud Kimball, Cedar Mountain, Cumberland #3, Demer, Farson, Horse Creek, Mesa Antelope, Owl Draw, Red Wash #2, Shoshoni #7, Sweetwater, Upper Government Draw. Phenophase descriptions and stages with numerical scales were established for four specific plant species: *Agropyron smithii*, *A. spicatum*, *Artemisia nova*, *A. tridentata*, and for one phenological inventory of all plant species. Seasonal development (March-November) has been recorded for more than 140 plant species. Individual plants of the four principal species in each of the research sites were permanently located for repeated observation.

Objectives

The objectives of the study are to determine:

(1) the relationship of phenodynamics with vegetation production and environmental data;

(2) relationships of phenodynamics and environmental characteristics to grazing and management procedures.

Methods and Procedures

The expanded numerical vegetative and reproductive phenological scales established in 1979 were used during the 1981 field season. The two scales were designated to allow simultaneous scoring of vegetative and reproductive development. The continuous numerical sets, from 1 thru 8 and 8 thru 18 for the vegetative and reproductive stages respectively, facilitates the application of quantitative analysis.

Twenty individual plants of each of the four principal species were permanently located along a 100 foot line in each exclosures. Every 5 ft. on the line, distance along and from the line for the closest plant, were recorded and utilized to identify individual plants at each sampling date.

Phenological measurements of Artemisia nova and A. tridentata included plant size, age, vegetative stages of growth with twig length, and reproductive stages of flowering and seed ripening with seed stalk length. Phenological measurements of Agropyron smithii and A. spicatum included plant size, age, vegetative stages of growth with leaf width and height; reproductive stages with spike height, number of spikelets per seed head and seed head development.

The plant age classes of shrubs are classified as:

1. = seedling;

2. = young and small;

3. = intermediate age and size;

4. = mature age and size;

5. = old and decadent.

The maturity of Agropyron spicatum clumps are classified as: (a) seedling, (b) young, (c) intermediate, (d) mature, and (e) old. Each maturity classification can then be designated as: (a) sparse, (b) intermediate, (c) dense and (d) decadent.

The vegetative phenological stages and numerical scores for the shrubs and forbs are listed below.

1. = winter dormancy.

2. = initial growth.

3. = early vegetative growth -- new leaves developing.

4. = immature vegetative growth -- twigs elongating.

5. = mature vegetative growth -- twigs elongated.

6. = vegetative parts browning.

7. = fall regreening and/or leaf shed.

8. = winter dormancy.

The reproductive phenological stages and numerical scores for the shrubs and forbs are:

8. = winter dormancy.

9. = floral bud stage -- first bud developing to initiation of bloom.

10. = early bloom -- initiation of bloom to 10% bloom.

11. = mid-bloom -- 10% to 75% bloom.

12. = late bloom -- flowers drying and seeds beginning to form,

13. = milk stage -- seed soft and immature.

14. = dough stage -- seed well formed but soft.

15. = ripe seed -- seeds mature and hard.

16. = reproductive parts browning -- seeds cast.

17. = fall regreening.

18. = winter dormancy.

The vegetative phenological stages and numerical scores for grasses are:

1. = winter dormancy.

2. = first leaf stage -- from the appearance of the first leaf to the appearance of the second leaf.

3. = second leaf state -- from the appearance of the second leaf to the appearance of the third leaf.

4. = third leaf stage -- from the appearance of the third leaf to the appearance of the fourth leaf.

5. = fourth leaf stage -- from the appearance of the fourth leaf to full leaf development.

6. = vegetative parts browning.

7. = fall regreening.

8. = winter dormancy.

The reproductive phenological stages and numerical scores for grasses are:

8. = winter dormancy.

9. = Boot stage -- the seed stalk is elongating and there is noticeable swelling of the seed head in boot.

10. = seedhead emergence -- from the beginning of emergence of the seedhead to the start of anthesis.

11. = early anthesis -- from initiation of anthesis to 50% of florets in bloom.

12. = full anthesis -- from 50% to 100% of florets in bloom.

13. = milk stage -- seed soft and immature.

14. = dough stage -- seed well formed but soft.

15. = ripe seed -- seeds hard and mature.

16. = reproductive parts browning -- seeds cast.

17. = fall regreening.

18. = winter dormancy.

Additional clarification is being developed with descriptive statements which define phenological appearance of the plants or several stages within a single whole number phenology value.

1981 Results

A listing of the phenology study exclosures, exclosure location by county and the principal phenology species scored in each exclosure is given in Table I. Table II is an alphabetical listing of all species found in the twelve study exclosures. Table III is a phenological inventory presented by exclosure and sampling date. The prime species intensive phenological survey of each permanently identified plant for each exclosure including phenological stage, plant dimensions, plant age class and percent dead material are given in Table IV. A summary of the Table IV data, averaged over the 20 sampled plants of each prime species by exclosure and sampling date are presented in Table V. 1973 through 1981 data on phenological development at each exclosure for three major growth stages are given in Table VI for the species listed in Table II.

1981 phenology curves for the principal species in each exclosure were compared to curves developed from the earliest and latest dates observed from 1973 to 1980 (Figure I).

TABLE I. Alphabetical listing of study areas, the county where each occurs, and the prime species.

Exclosure Name	County	Prime Species
Bud Kimball	Washakie	Agropyron spicatum Agropyron smithii Artemisia tridentata
Cedar Mountain	Sweetwater	Agropyron spicatum Artemisia tridentata
Cumberland #3	Lincoln	Agropyron smithii Agropyron spicatum Artemisia tridentata
Demer	Washakie	Agropyron smithii Agropyron spicatum Artemisia tridentata
Farson	Sweetwater	Agropyron smithii Artemisia tridentata
Horse Creek	Big Horn	Agropyron smithii Agropyron spicatum Artemisia nova Artemisia tridentata
Mesa Antelope	Sublette	Agropyron smithii Artemisia tridentata
Owl Draw	Natrona	Agropyron smithii Agropyron spicatum Artemisia nova Artemisia tridentata
Red Wash #2	Sweetwater	Agropyron smithii Agropyron spicatum Artemisia tridentata
Shoshone Ant #7	Fremont	Agropyron smithii Artemisia tridentata
Sweetwater	Fremont	Agropyron smithii Artemisia nova Artemisia tridentata
Upper Gov't. Draw	Fremont	Agropyron smithii Artemisia tridentata

TABLE II. LIST OF PLANT NAMES WHICH OCCURRED IN PHENOLOGY STUDY AREAS.

Code	Genus-Species	Common Name	Life Form	Longevity
ACLA	Achillea lanulosa	Western yarrow	Forb	Perennial
AGGL	Agroseris glauca	Pale agoseris	Forb	Perennial
AGCR	Agropyron cristatum	Crested wheatgrass	Grass	Perennial
AGSM	Agropyron smithii	Western wheatgrass	Grass	Perennial
AGSP	Agropyron spicatum	Bluebunch wheatgrass	Grass	Perennial
ALCE	Allium cernuum	Nodding onion	Forb	Perennial
ALTE	Allium textile	Prairie onion	Forb	Perennial
AMAL	Amelanchier alnifolia	Saskatoon serviceberry	Shrub	Perennial
ANSE	Androsace septentrionalis	Rock jasmine	Forb	Annual
ANDI	Antennaria dimorpha	Low pussytoe	Mat-form	Perennial
ANRO	Antennaria rosea	Rose pussytoes	Mat-form	Perennial
ANT	Antennaria spp.	Pussytoe	Forb	Perennial
ARHO[2]	Arabis holboellii	Holboell rockcress	Forb	Perennial
ARLI	Arabis lignifera	Woody rockcress	Forb	Perennial
ARCO	Arenaria congesta	Ballhead sandwort	Forb	Perennial
ARHO	Arenaria hookeri	Hooker sandwort	Mat-form	Perennial
ARFE	Aristida fenderiana	Fendler three-awn	Grass	Perennial
ARFU	Arnica fulgens	Orange arnica	Forb	Perennial
ARFR	Artemisia frigida	Fringed sagewort	Half-shrub	Perennial
ARNO	Artemisia nova	Black sagebrush	Shrub	Perennial
ARSP	Artemisia spinescens	Bud sagewort	Half-shrub	Perennial
ARTR	Artemisia tridentata	Big sagebrush	Shrub	Perennial
ASCA	Aster canescens	Hoary aster	Forb	Perennial
ASCI	Astragalus cibarius	Silky milkvetch	Forb	Perennial
ASDI	Astragalus diversifolius	Meadow milkvetch	Forb	Perennial
ASDR	Astragalus drummondii	Drummond milkvetch	Forb	Perennial
ASGR	Astragalus grayi	Gray's milkvetch	Forb	Perennial
ASKE	Astragalus kentrophyta	Nuttall kentrophyta m.	Forb	Perennial
ASMI[2]	Astragalus miser	Timber milkvetch	Forb	Perennial
ASMI	Astragalus missouriensis	Missouri milkvetch	Forb	Perennial
ASPU	Astragalus purshii	Pursh milkvetch	Forb	Perennial
ASSP	Astragalus spatulatus	Tufted milkvetch	Mat-form	Perennial
AST	Astragalus spp.	Milkvetch	Forb	Perennial
ATCO	Atriplex confertifolia	Shadscale saltbush	Shrub	Perennial
ATGA	Atriplex gardneri	Gardner saltbush	Half-shrub	Perennial
BAIN	Balsamorhiza incana	Hoary balsamroot	Forb	Perennial
BASA	Balsamorhiza sagittata	Arrowleaf balsamroot	Forb	Perennial
BEWY	Besseya wyomingensis	Wyoming kittentails	Forb	Perennial
BOGR	Bouteloua gracilis	Blue grama	Grass	Perennial
BRJA	Bromus japonicus	Japanese chess	Grass	Annual
BRTE	Bromus tectorum	Cheatgrass	Grass	Annual
CANU	Calochortus nuttallii	Sego mariposalily	Forb	Perennial
CAMI	Camelina microcarpa	Littlepod falseflax	Forb	Annual
CAEL	Carex eleocharis	Needleleaf sedge	Sedge	Perennial
CAFI	Carex filifolia	Threadleaf sedge	Sedge	Perennial
CAAN	Castilleja angustifolia	Narrowleaf Indianpaint b.	Forb	Perennial
CACH	Castilleja chromosa	Desert Indianpaintbrush	Forb	Perennial
CALI	Castilleja linariaefolia	Wyoming Indian paintbrush	Forb	Perennial

TABLE II. (Continued)

Code	Genus-Species	Common Name	Life Form	Longevity
CAS	Castilleja spp.	Indianpaintbrush	Forb	Perennial
CELA	Ceratoides lanata	Winterfat	Half-shrub	Perennial
CHDO	Chaenactis douglasii	Douglas dustymaiden	Forb	Perennial
CHE	Chenopodium spp.	Goosefoot	Forb	Annual
CHAL	Chenopodium album	Lambsquarter	Forb	Annual
CHDE	Chenopodium dessicatum	Desert goosefoot	Forb	Annual
CHFR	Chenopodium fremontii	Fremont goosefoot	Forb	Annual
CHLE	Chenopodium leptophyllum	Narrowleaf goosefoot	Forb	Annual
CHTE	Chorispora tenella	Common bluemustard	Forb	Annual
CHNA	Chrysothamnus nauseosus	Rubber rabbitbrush	Shrub	Perennial
CHVI	Chrysothamnus viscidiflorus	Douglas rabbitbrush	Shrub	Perennial
CIR	Cirsium spp.	Thistle	Forb	Perennial
CIUN	Cirsium undulatum	Wavyleaf thistle	Forb	Perennial
CLLU	Cleome lutea	Yellow beeplant	Forb	Annual
CLSE	Cleome serrulata	Rockymountain beeplant	Forb	Annual
COPA	Comandra pallida	Pale bastardtoadflax	Forb	Perennial
COLI	Collomia linearis	Slenderleaf collomia	Forb	Annual
COPA^2	Collinsia parviflora	Smallflowered blueeyedmary	Forb	Annual
CORA	Cordylanthus ramosus	Branched birdbeak	Forb	Annual
CRAC	Crepis acuminata	Tapertip hawksbeard	Forb	Perennial
CRMO	Crepis modocensis	Yellowstone hawksbeard	Forb	Perennial
CROC	Crepis occidentalis	Western hawksbeard	Forb	Perennial
CRBR	Cryptantha bradburiana	Miners candle	Forb	Perennial
CRFE	Cryptantha fendleri	Fendler cryptantha	Forb	Annual
CRFL	Cryptantha flavoculata	Roughseed cryptantha	Forb	Perennial
CRY	Cryptantha spp.	Cryptantha	Forb	Perennial
CYMO	Cymopterus montanus	Mountain springparsley	Forb	Perennial
DEGE	Delphinium geyeri	Plains larkspur	Forb	Perennial
DEPI	Descurainia pinnata	Pinnate tansymustard	Forb	Annual
DOCO	Dodecatheon conjugens	Sailorcaps shootingstars	Forb	Perennial
ERCA^2	Erigeron canadensis	Horseweed fleabane	Forb	Annual
EROC	Erigeron ochroleucus	Creamy fleabane	Forb	Perennial
ERPU	Erigeron pumilus	Low fleabane	Forb	Perennial
ERI	Erigeron spp.	Fleabane	Forb	Perennial
ERBR	Eriogonum brevicaule	Shortstem wildbuckwheat	Forb	Perennial
ERCA	Eriogonum caespitosum	Mat wildbuckwheat	Mat-form	Perennial
ERCE	Eriogonum cernuum	Nodding wildbuckwheat	Forb	Annual
ERMI	Eriogonum microthecum	Slenderbrush wildbuckwheat	Shrub	Perennial
EROV	Eriogonum ovalifolium	Cushion wildbuckwheat	Mat-form	Perennial
ERSU	Eriogonum subalpinum	Subalpine wildbuckwheat	Mat-form	Perennial
ERAS	Erysimum asperum	Plains wallflower	Forb	Perennial
EUSE	Euphorbia serphyllifolia	Thymeleaf spurge	Forb	Annual
FRAT	Fritillaria atropurpurea	Purplespot fritillary	Forb	Perennial
GACO	Gaura coccinea	Scarlet gaura	Forb	Perennial
GIAG	Gilia aggregata	Skyrocket gilia	Forb	Perennial
GICO	Gilia congesta	Ballhead gilia	Forb	Perennial
GIPU	Gilia pumila	Dwarf gilia	Forb	Annual
GRSP	Grayia spinosa	Spiny hopsage	Shrub	Perennial

TABLE II. (Continued)

Code	Genus-Species	Common Name	Life-form	Longevity
GRSQ	Grindelia squarrosa	Curlycup gumweed	Forb	Biennial
HAGL	Halogeton glomeratus	Halogeton	Forb	Annual
HAAC	Haploppapus acaulis	Stemless goldenweed	Mat-form	Perennial
JUOS	Juniperus osteosperma	Utah juniper	Shrub-tree	Perennial
JUSC	Juniperus scopulorum	Rockymountain juniper	Shrub-tree	Perennial
KOAM	Kochia americana	Greenmolly summercypress	Half-shrub	Perennial
KOCR	Koeleria cristata	Prairie junegrass	Grass	Perennial
LAIN	Lactuca integrata	Lettuce	Forb	Perennial
LASE	Lactuca serriola	Prickly lettuce	Forb	Perennial
LARE	Lappula redowskii	Bluebur stickseed	Forb	Annual
LEDE	Lepidium densiflorum	Prairie pepperweed	Forb	Annual
LEPE	Lepidium perfoliatum	Clasping pepperweed	Forb	Annual
LEPU	Leptodactylon pungens	Granite gilia	Half-shrub	Perennial
LERE	Lewisia rediviva	Bitterroot	Forb	Perennial
LEAL	Lesquerella alpina	Alkaline bladderpod	Forb	Perennial
LELU	Lesquerella ludoviciana	Foothill bladderpod	Forb	Perennial
LES	Lesquerella spp.	Bladderpod	Forb	Annual
LILE	Linum lewisii	Lewis flax	Forb	Perennial
LIIN	Lithospermum incisum	Narrowleaf gromwell	Forb	Perennial
LIRU	Lithosperum ruderale	Wayside gromwell	Forb	Annual
LOFO	Lomatium foeniculum	Hairyseed lomatium	Forb	Perennial
LOOR	Lomatium orientale	Eastern lomatium	Forb	Perennial
LOSI	Lomatium simplex	Narrowleaf lomatium	Forb	Perennial
LUPU	Lupinus pusillus	Rusty lupine	Forb	Annual
MACA	Machaeranthera canescens	Hoary aster	Forb	Perennial
MAGR	Machaeranthera grindeloides	Pinnate woody-aster	Half-shrub	Perennial
MATA	Machaeranthera tanacetifolia	Tansyleaf aster	Forb	Annual
MAVI	Mamillaria vivipara	Pink pincushion cactus	Forb	Perennial
MELO	Mertensia longiflora	Small bluebells	Forb	Perennial
MIGR	Microsteris gracilis	Pink microsteris	Forb	Annual
MONU	Monolepis nuttalliana	Nuttall monolepis	Forb	Annual
MUDI	Musineon divaricatum	Leafy musineon	Forb	Perennial
OEAL	Oenothera albicaulis	Pale eveningprimrose	Forb	Perennial
OECA	Oenothera caespitosa	Tufted eveningprimrose	Forb	Perennial
OECO	Oenothera contorta	Plains eveningprimrose	Forb	Annual
OPPO	Opuntia polyacantha	Plains pricklypear	Succulent	Perennial
ORFA	Orobanche fasciculata	Tufted broomrape	Sapprophyte	Perennial
ORHY	Oryzopis hymenoides	Indian ricegrass	Grass	Perennial
OXLA	Oxytropis lambertii	Lambert crazyweed	Forb	Perennial
PECL	Penstemon cleburnei	Cleyburn penstemon	Forb	Perennial
PEFR	Penstemon fremonti	Fremont penstemon	Forb	Perennial
PELA	Penstemon laricifolius	Larchleaf penstemon	Forb	Perennial
PEN	Penstemon spp.	Penstemon	Forb	Perennial
PHHO	Phlox hoodii	Hood's phlox	Mat-form	Perennial
PHLO	Phlox longiflora	Long-leaf phlox	Half-shrub	Perennial
PHMU	Phlox multiflora	Flowery phlox	Forb	Perennial
PLPA	Plantago patagonica	Wooly Indianwheat	Forb	Annual
PLSP	Plantago spinescens	Spiny Indianwheat	Forb	Annual

TABLE II. (Continued)

Code	Genus-Species	Common Name	Life Form	Longevity
POAM	Poa ampla	Big bluegrass	Grass	Perennial
POCA	Poa canbyi	Canby bluegrass	Grass	Perennial
POFE	Poa fendleriana	Mutton bluegrass	Grass	Perennial
POSE	Poa secunda	Sandberg bluegrass	Grass	Perennial
POL	Polygonum spp.	Knotweed, Smartweed	Forb	Perennial
POAV	Polygonum aviculare	Prostrate knotweed	Forb	Annual
PSTE	Psoralea tenuiflora	Slimflower scurfpea	Forb	Perennial
RHTR	Rhus trilobata	Skunkbush sumac	Shrub	Perennial
SAIB	Salsola iberica	Russian thistle	Forb	Annual
SAVE	Sarcobatus vermiculatus	Greasewood	Shrub	Perennial
SELA	Sedum lanceolatum	Lanceleaf stonecrop	Forb	Perennial
SEST	Sedum stenopetalum	Wormleaf stonecrop	Forb	Perennial
SEDE	Selaginella densa	Spikemoss selaginella	Clubmoss	Perennial
SECA	Senecio canus	Woolly groundsel	Forb	Perennial
SEIN	Senecia integerrimus	Lambstongue groundsel	Forb	Perennial
SIAL	Sisymbrium altissimum	Tumbling hedgemustard	Forb	Annual
SILI	Sisymbrium linifolium	Narrowleaf hedgemustard	Forb	Perennial
SIHY	Sitanion hystrix	Squirreltail bottlebrush	Grass	Perennial
SPCO	Sphaeralcea coccinea	Scarlet globemallow	Forb	Perennial
STCO	Stipa comata	Needleandthread	Grass	Perennial
STVI	Stipa viridula	Green needlegrass	Grass	Perennial
SYOC	Symphoricarpos occidentalis	Western snowberry	Shrub	Perennial
TAOF	Taraxacum officinale	Common dandelion	Forb	Perennial
TECA	Tetradymia canescens	Gray horsebrush	Shrub	Perennial
TENU	Tetradymia nuttallii	Nuttall horsebrush	Shrub	Perennial
TESP	Tetradymia spinosa	Cottonthorn horsebrush	Shrub	Perennial
THAR	Thlaspi arvense	Fanweed	Forb	Annual
TOIN	Townsendia incana	Hoary townsendia	Forb	Perennial
TRDU	Tragopogon dubius	Yellow salsify	Forb	Biennial
TRGY	Trifolium gymnocarpon	Hollyleaf clover	Forb	Perennial
TRI	Trifolium spp.	Clover	Forb	Perennial
UMB	Umbelliferae fam.	Falsecarrot	Forb	Perennial
VIAM	Vicia americana	American vetch	Forb	Perennial
VIVA	Viola vallicola	Nuttall violet	Forb	Perennial
VINU	Viola nuttallii	Nuttall violet	Forb	Perennial
VIO	Viola spp.	Violet	Forb	Perennial
VUOC	Vulpia octoflora	Common sixweeksgrass	Grass	Annual
WYAM	Wyethia amplexicaulis	Mulesear wyethia	Forb	Perennial
XASA	Xanthocephalum sarothrae	Broom snakeweed	Half-shrub	Perennial
YUGL	Yucca glauca	Small soapweed	Forb	Perennial
ZIPA	Zigadenus paniculatus	Foothill death camus	Forb	Perennial
ZIVE	Zigadenus venenosus	Death camus	Forb	Perennial

Figure 1. Phenological progression curve for 1981 for each of the prime species at each exclosure. Current year compared to earliest and latest phenological development from 1973 through 1980.

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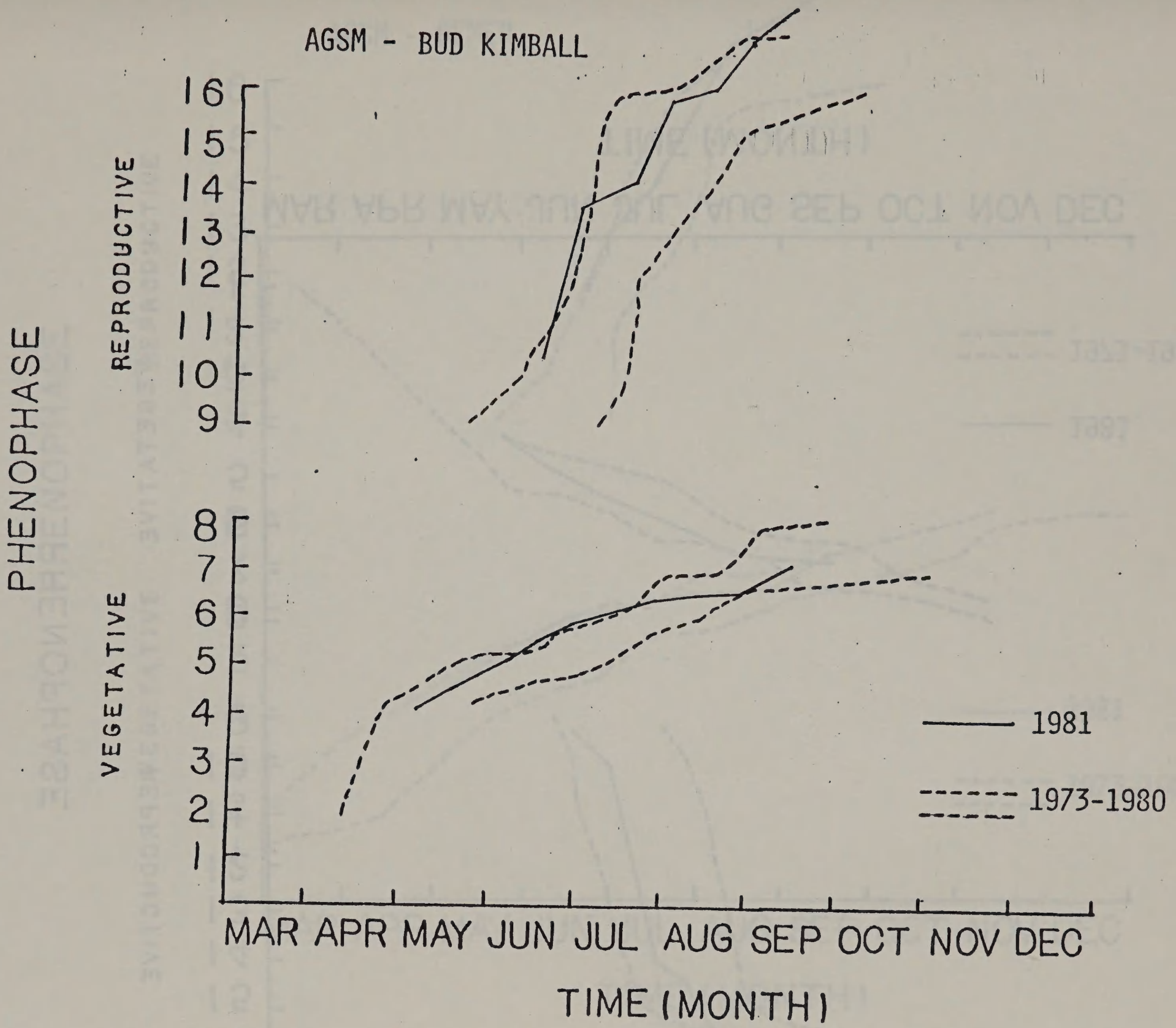
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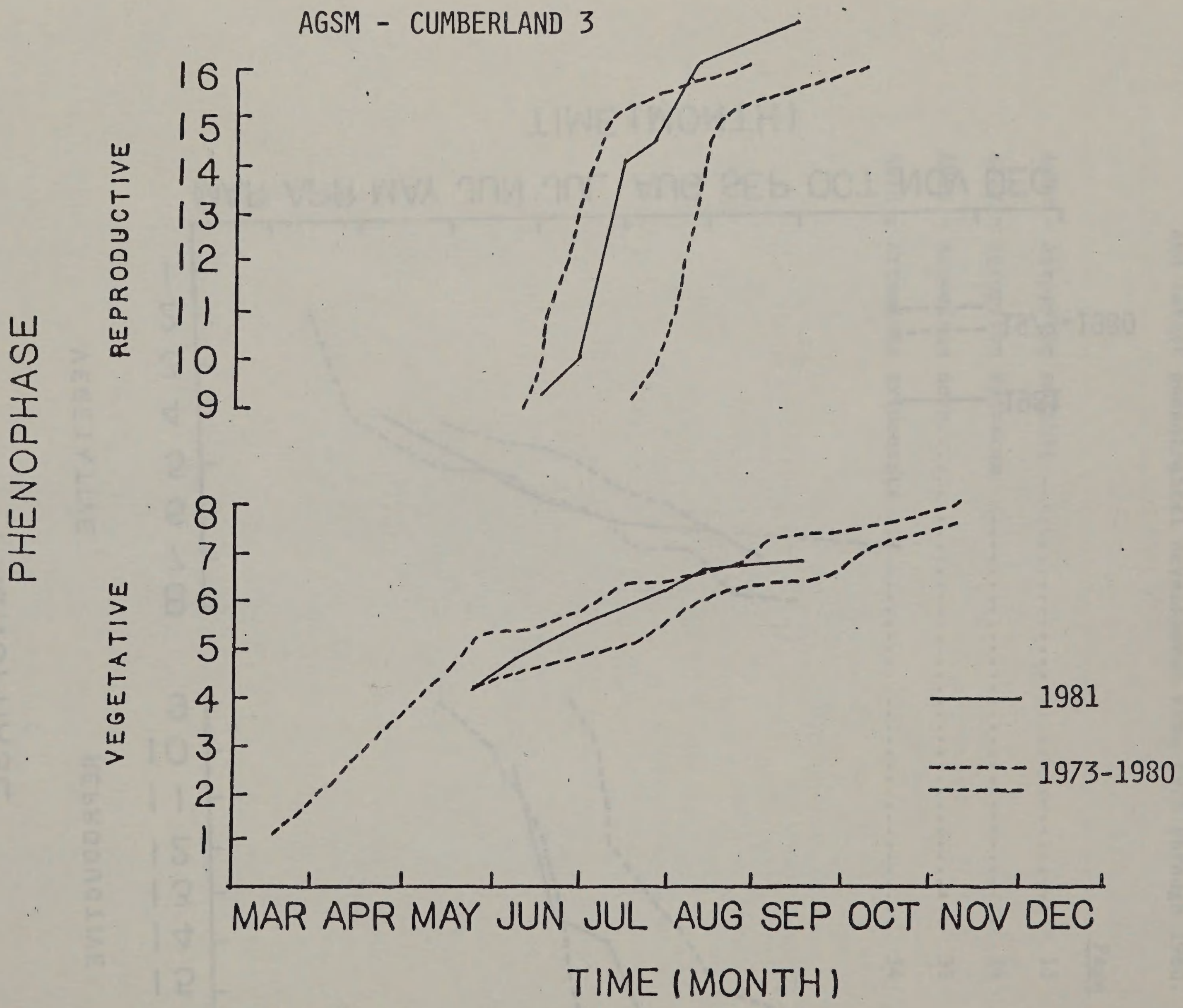
TIME (MONTH)
1981
1973-1980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PHENOPHASE
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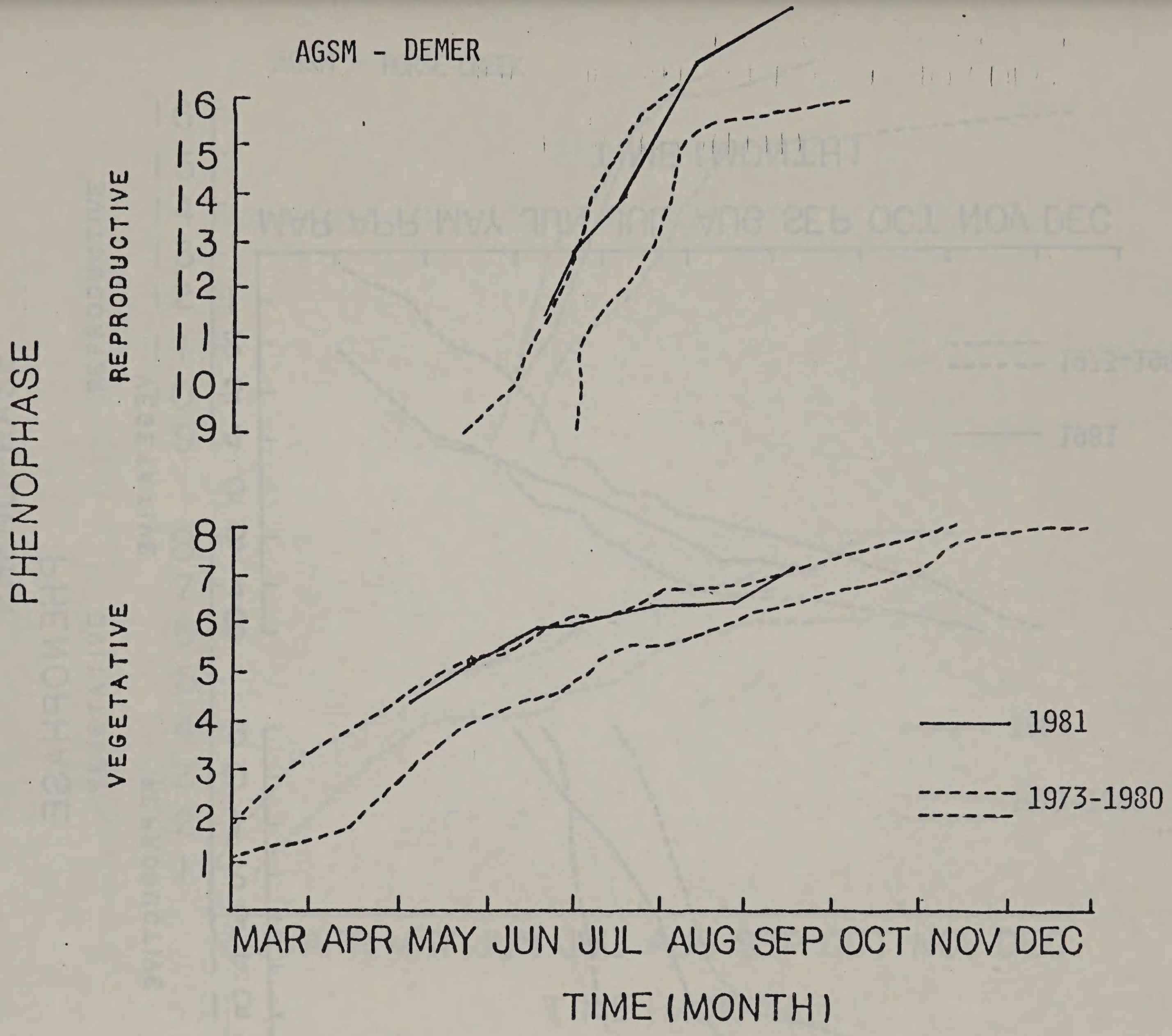
TIME (MONTH)
1981
1973-1980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REPRODUCTIVE
VEGETATIVE
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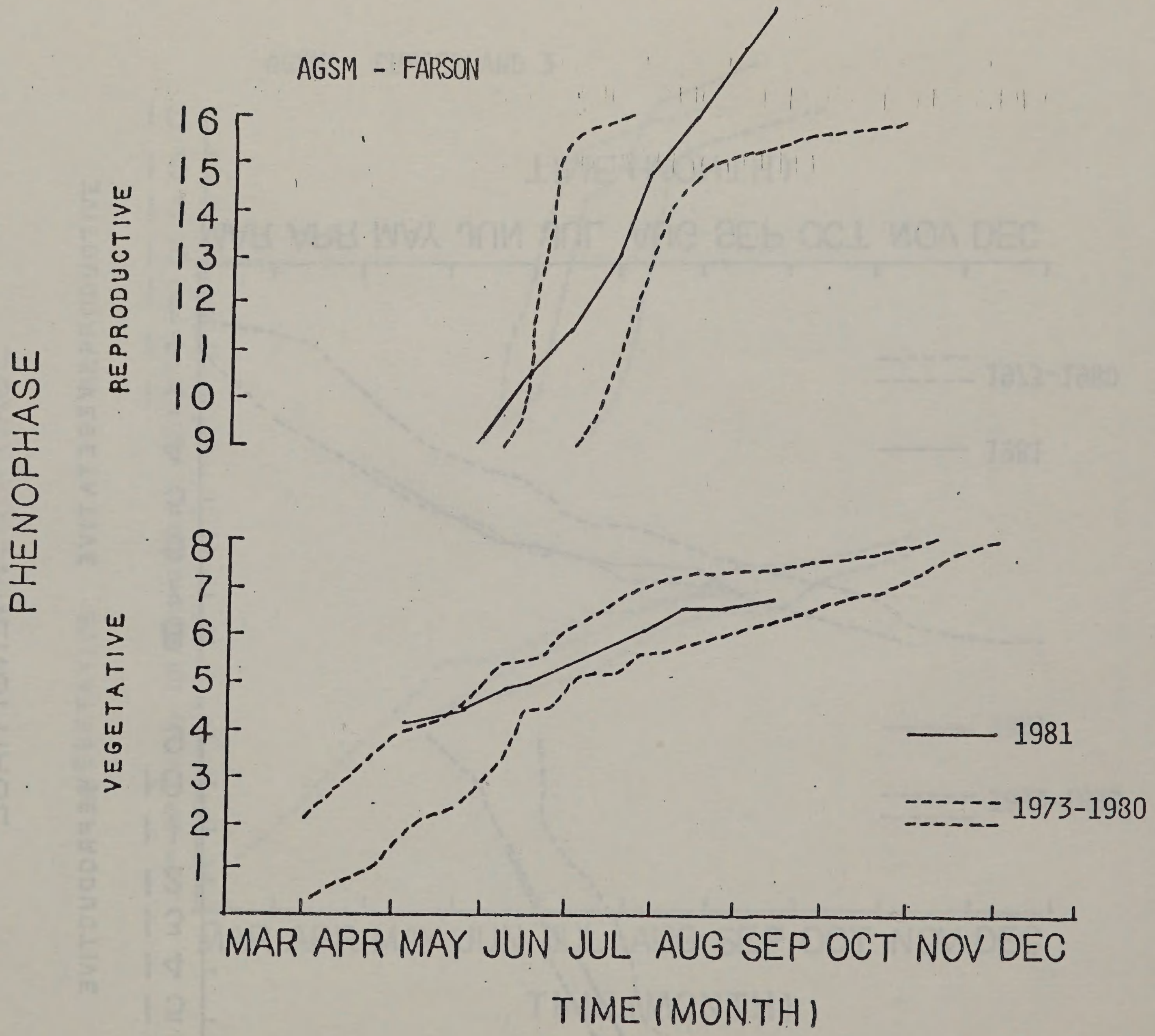
TIME (MONTH)
1981
1973-1980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VEGETATIVE
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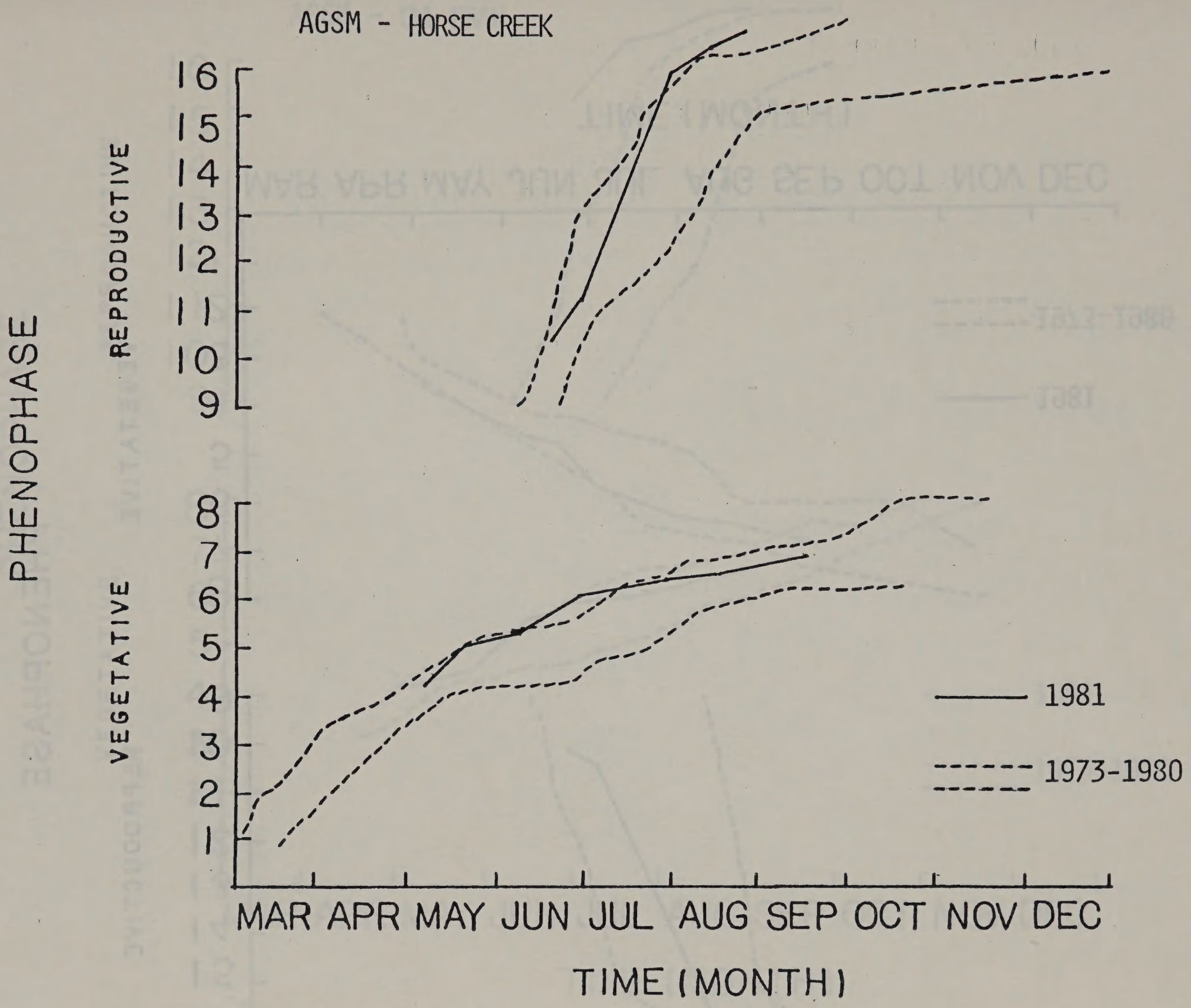
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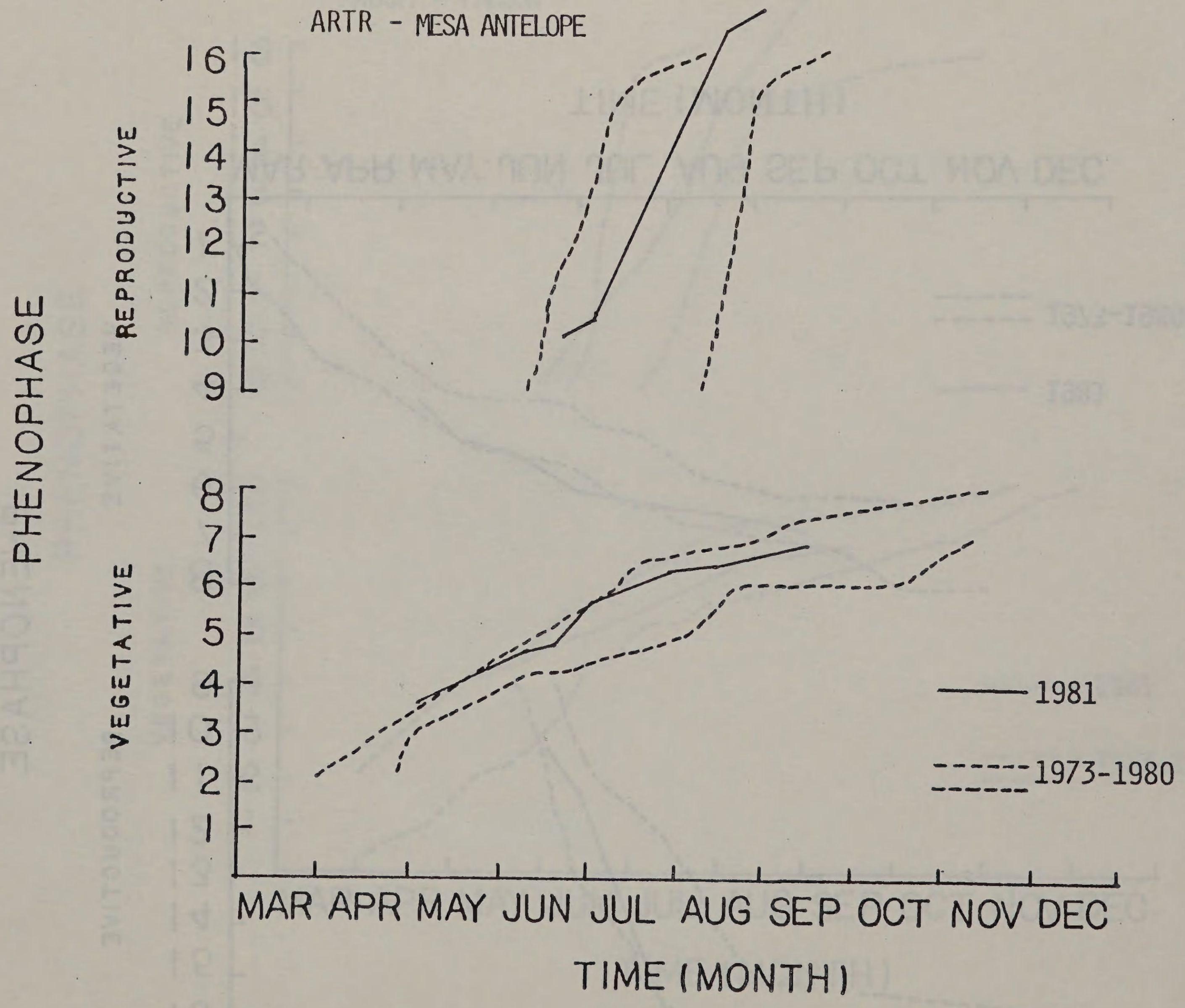
TIME (MONTH)
1981
1973-1980



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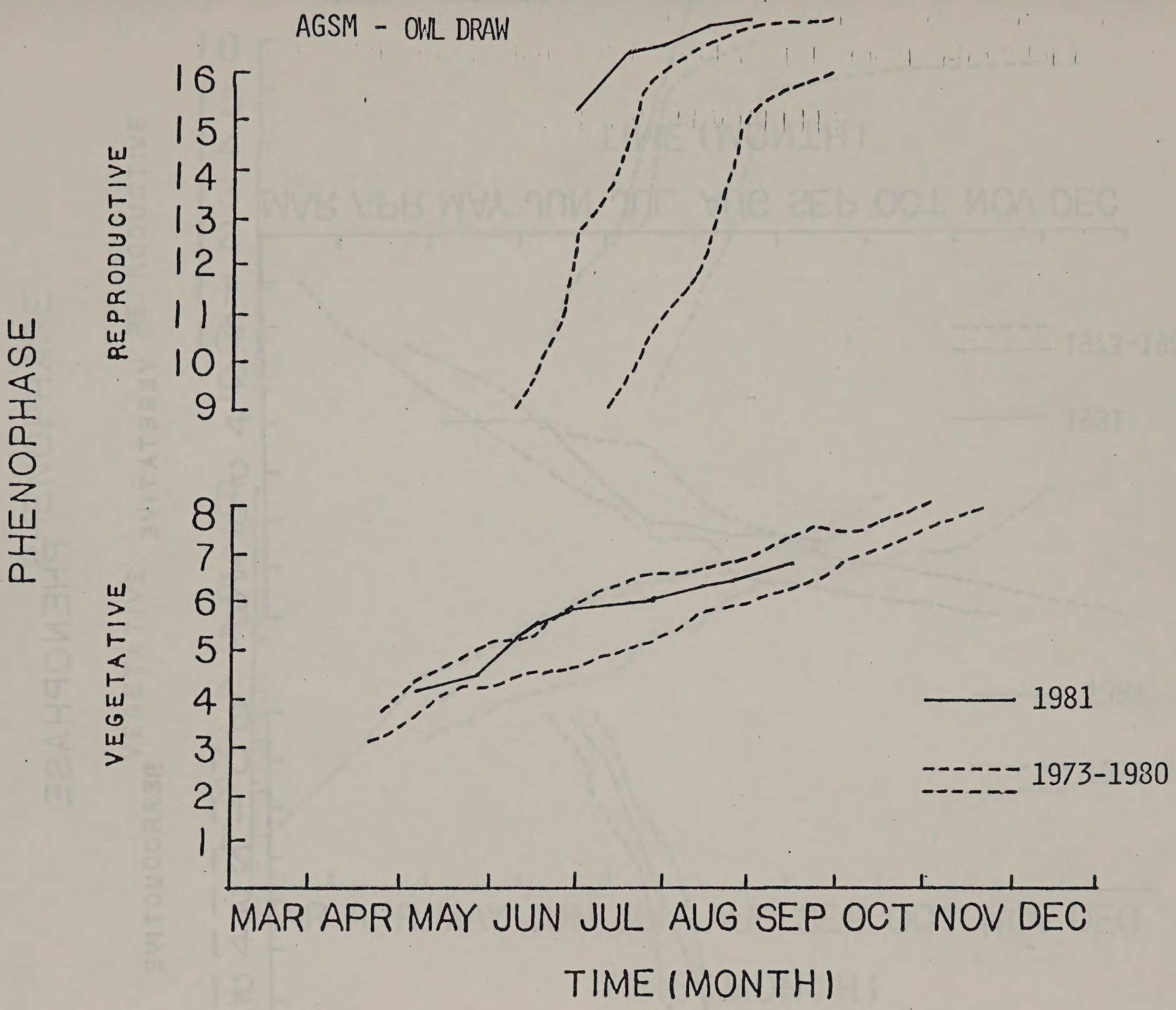
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PHENOPHASE
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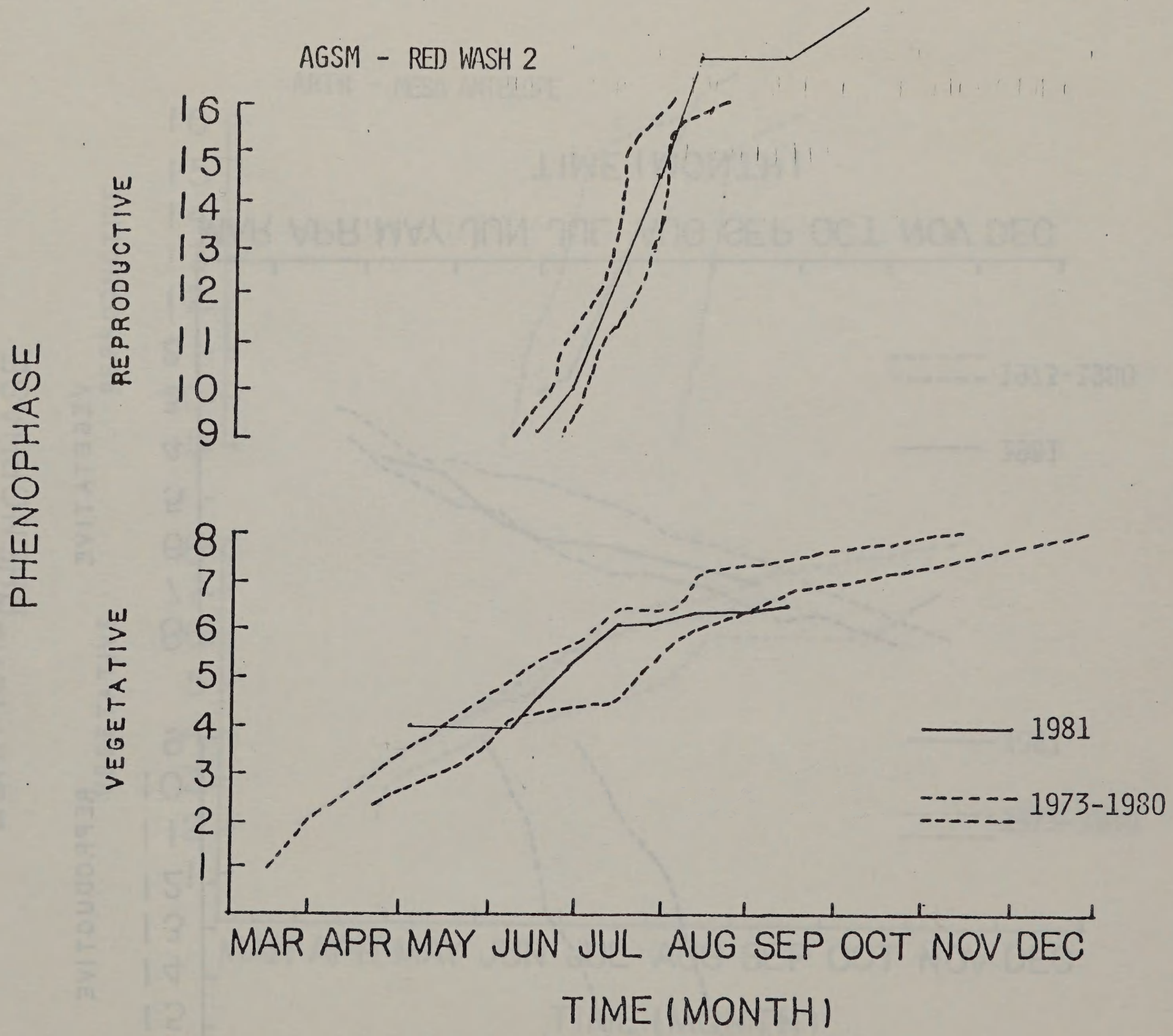
TIME (MONTH)
1981
1973-1980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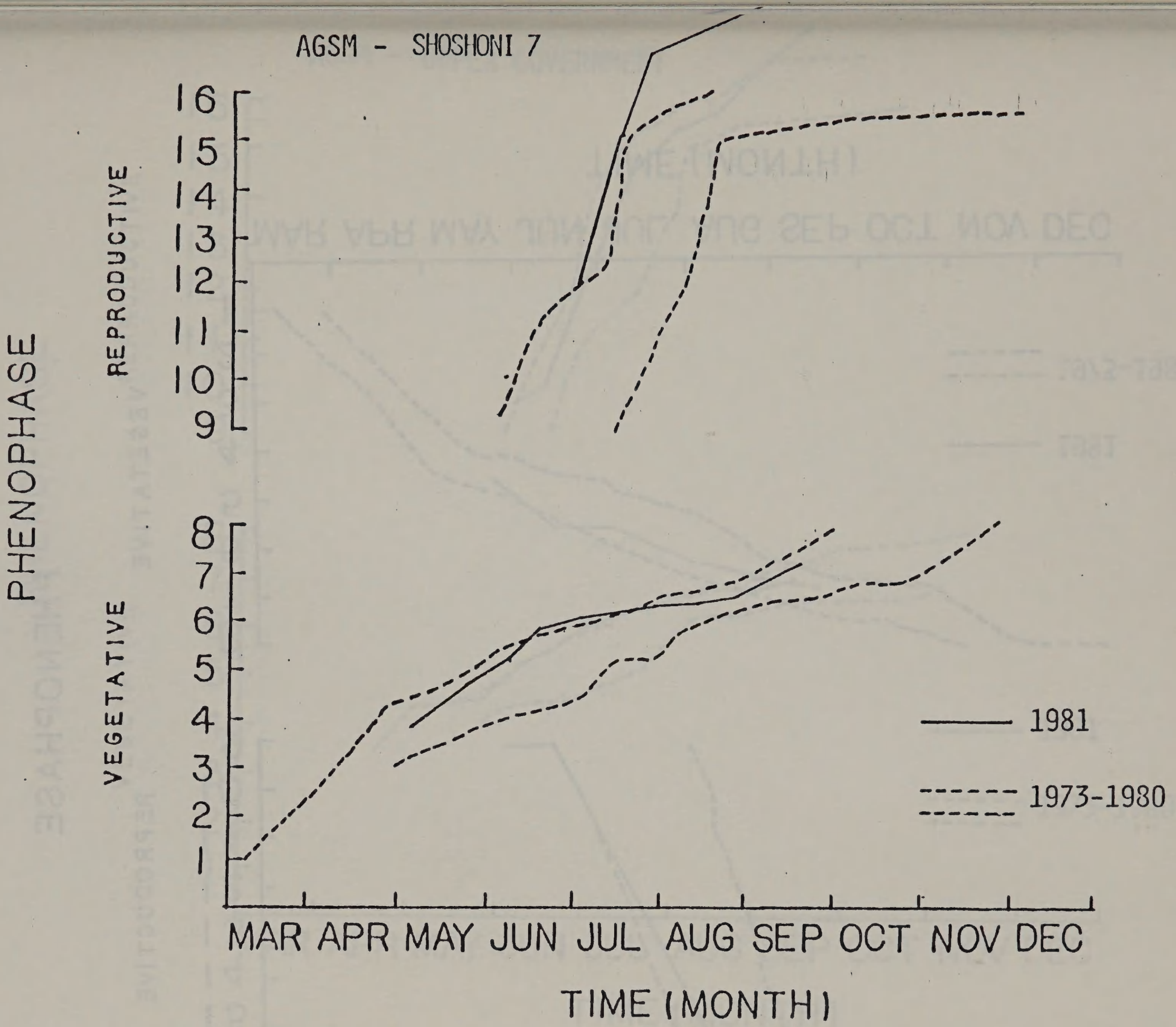
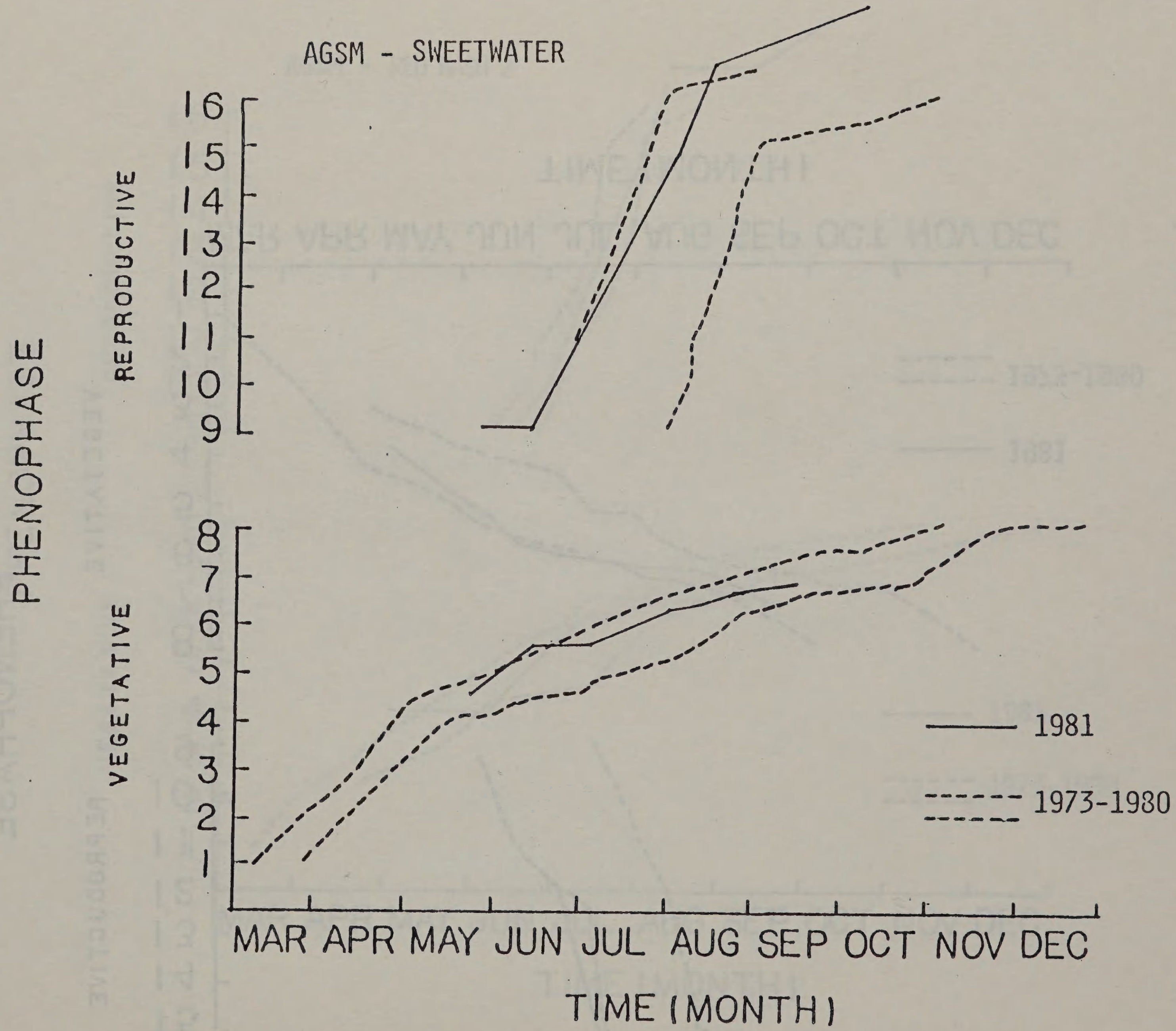
TIME (MONTH)
1981
1973-1980


AGSM - SHOSHONI 7

AGSM - SWEETWATER
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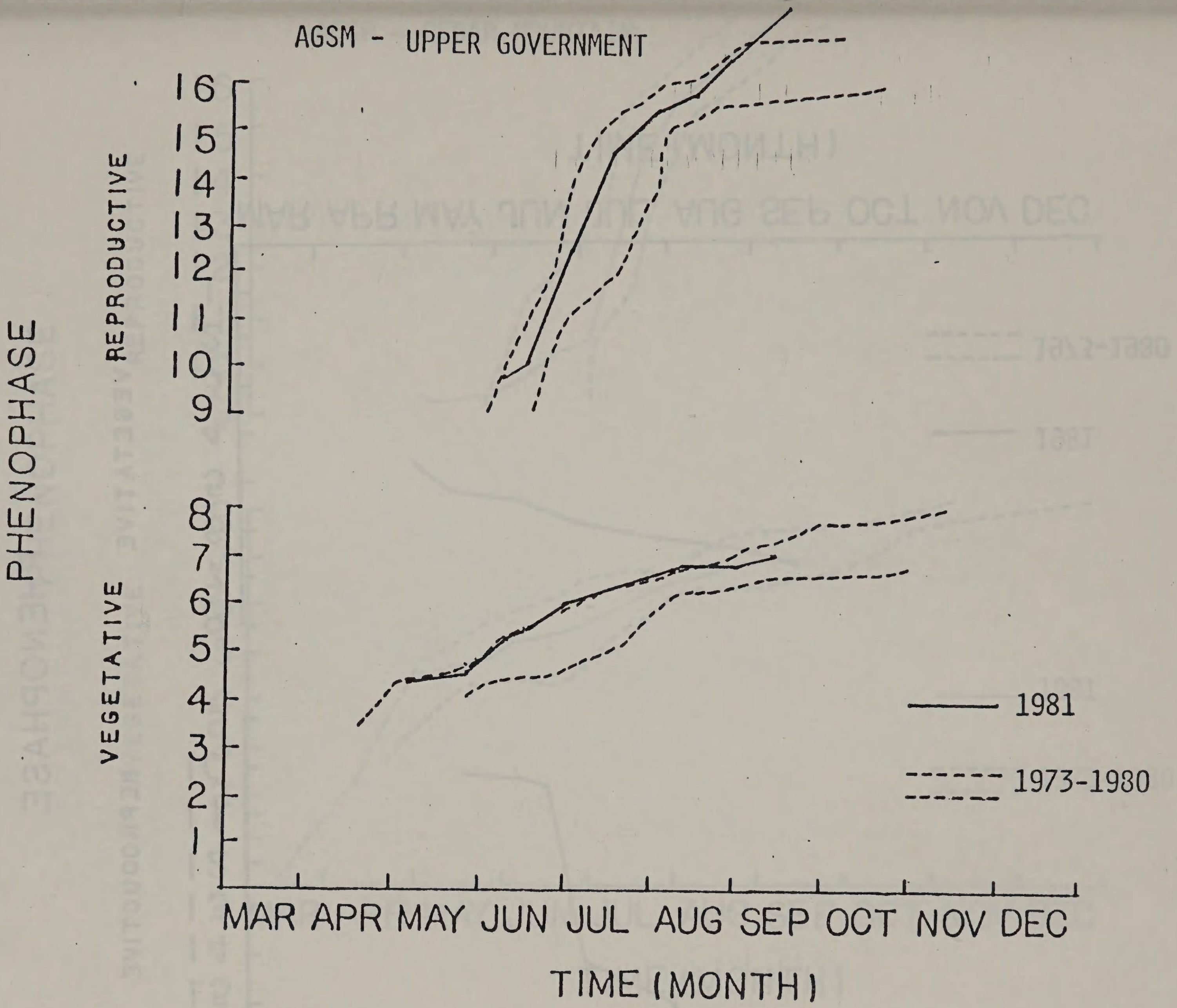
TIME (MONTH)
1981
1973-1980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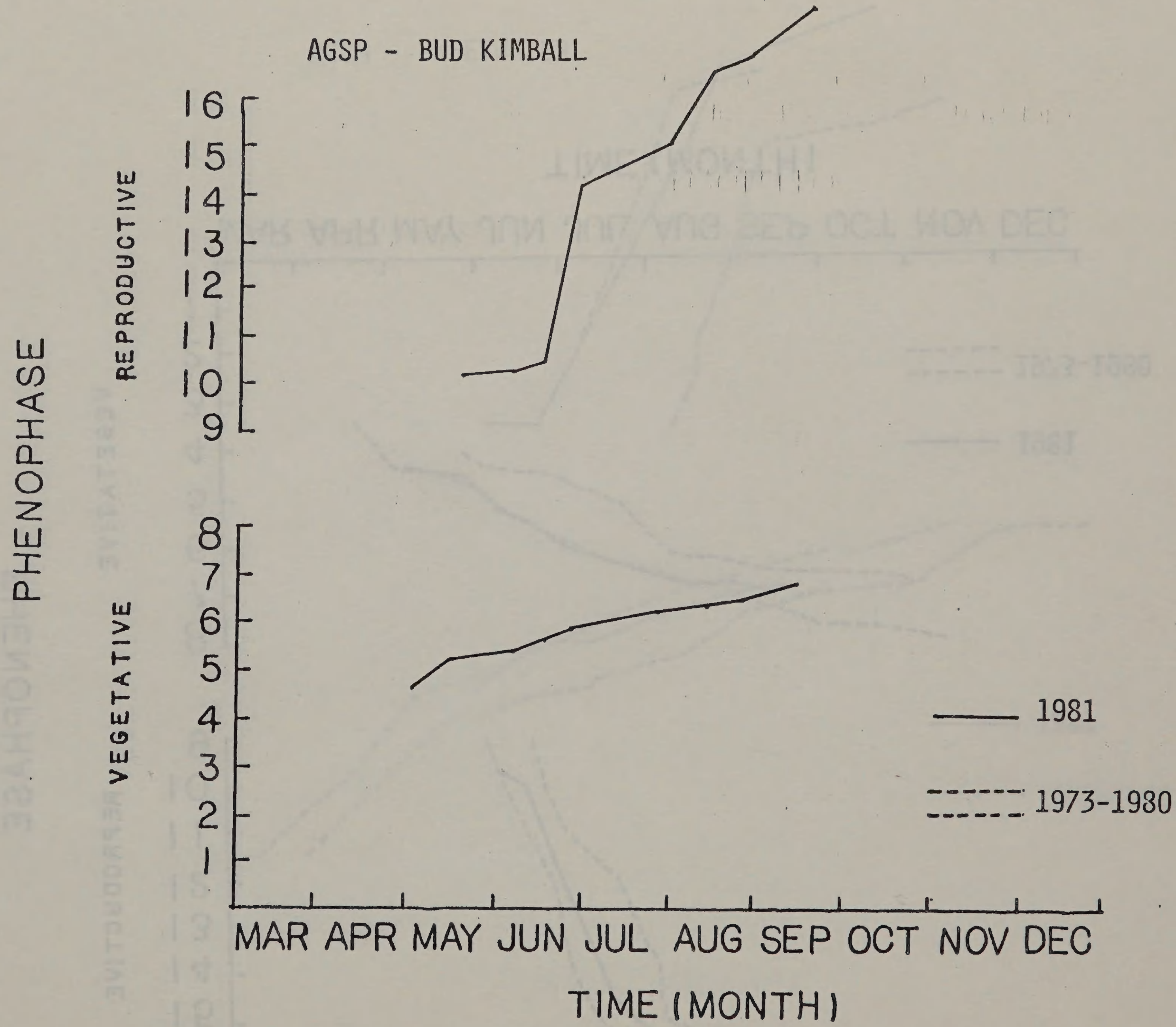
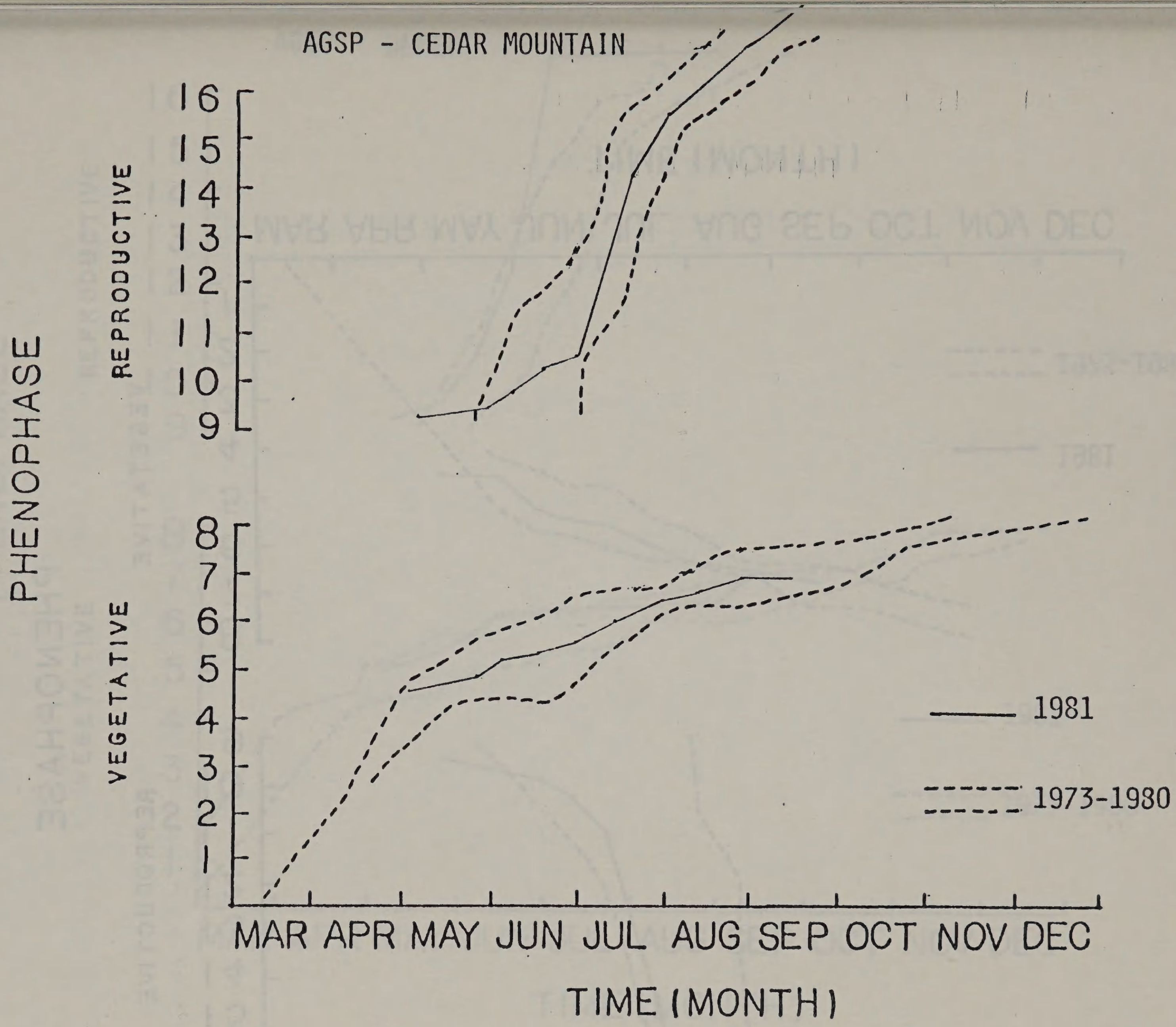
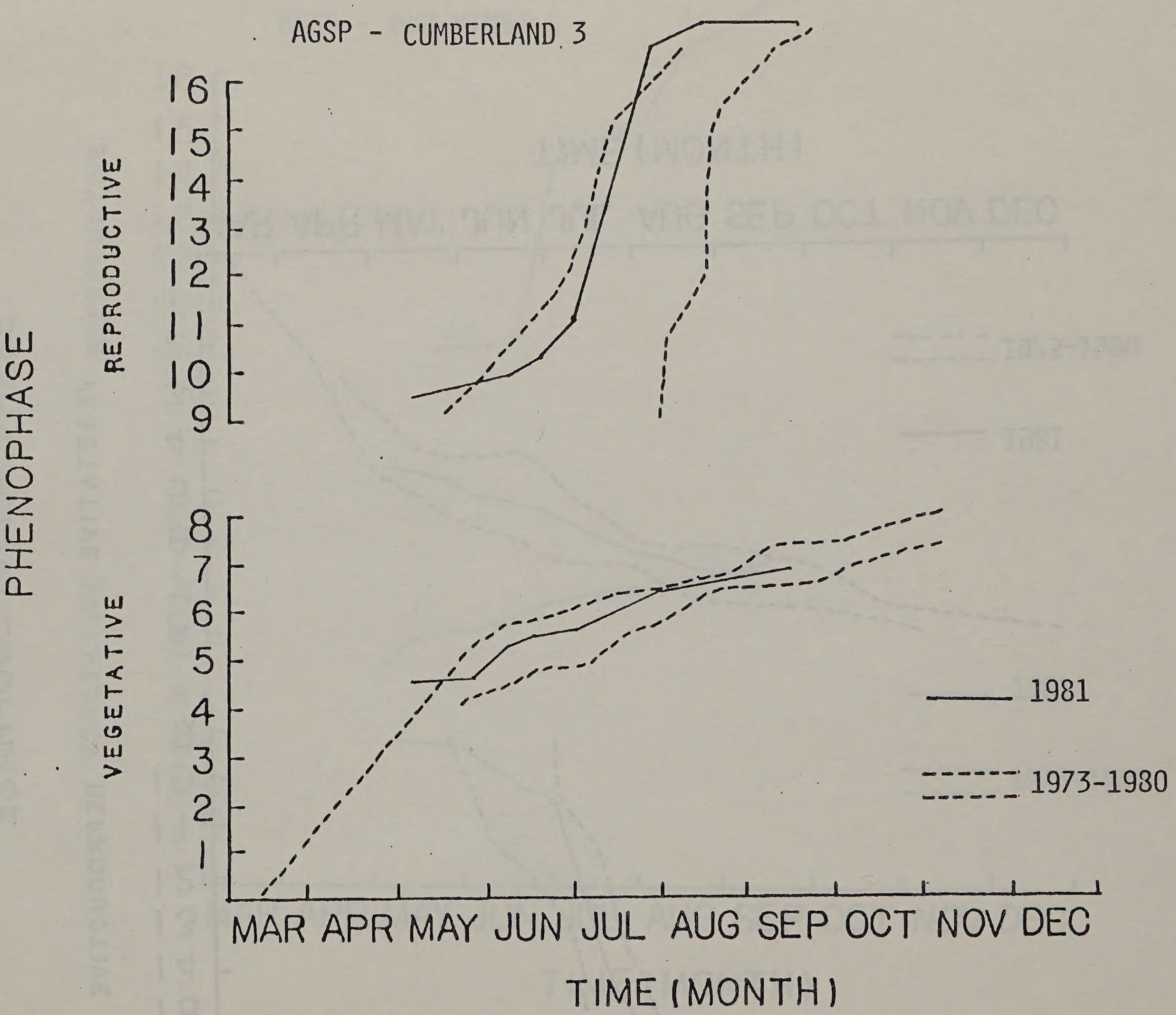
TIME (MONTH)
1981
1973-1980


AGSP - BUD KIMBALL



AGSP - CEDAR MOUNTAIN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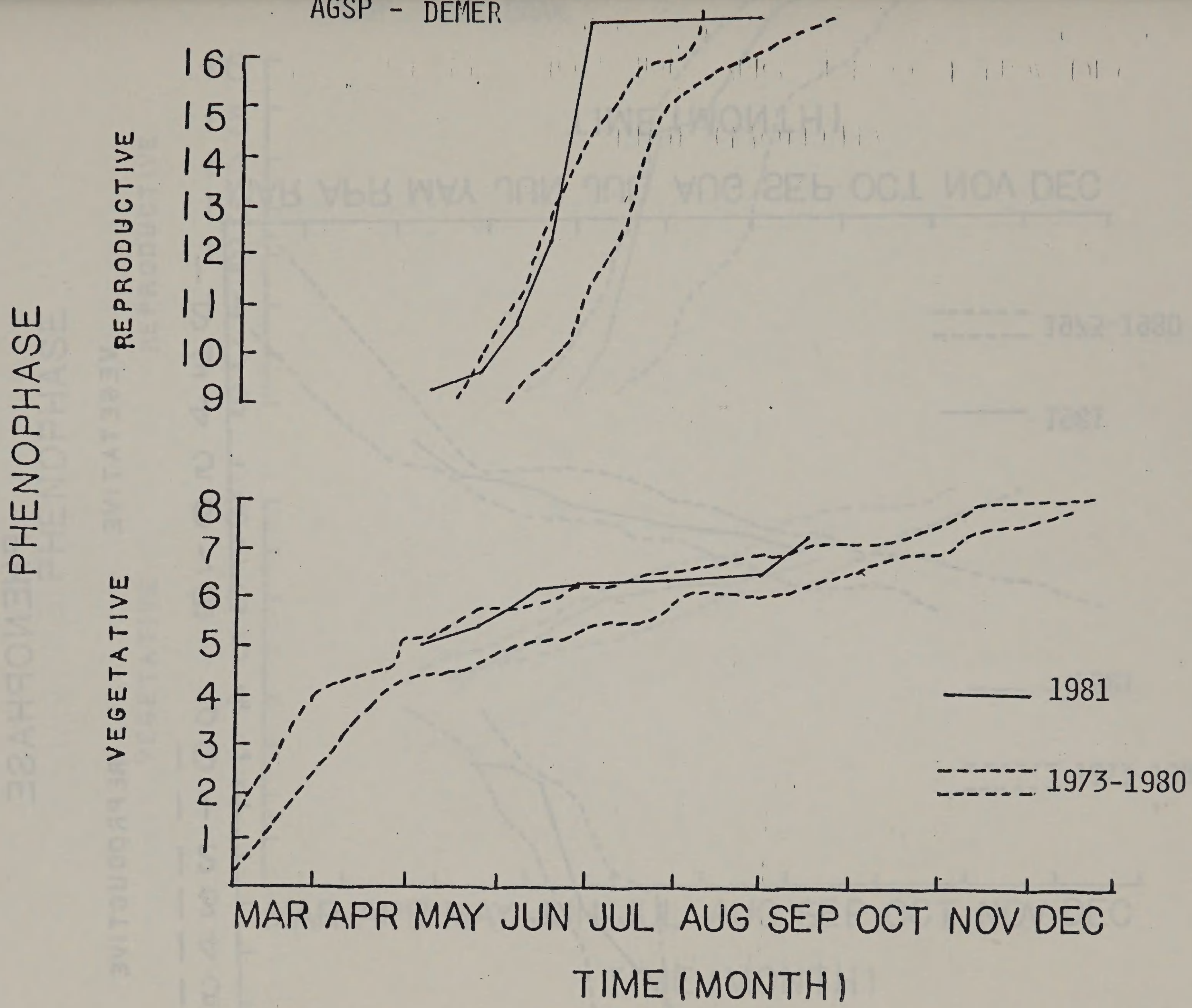
TIME (MONTH)
1981
1973-1980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TIME (MONTH)
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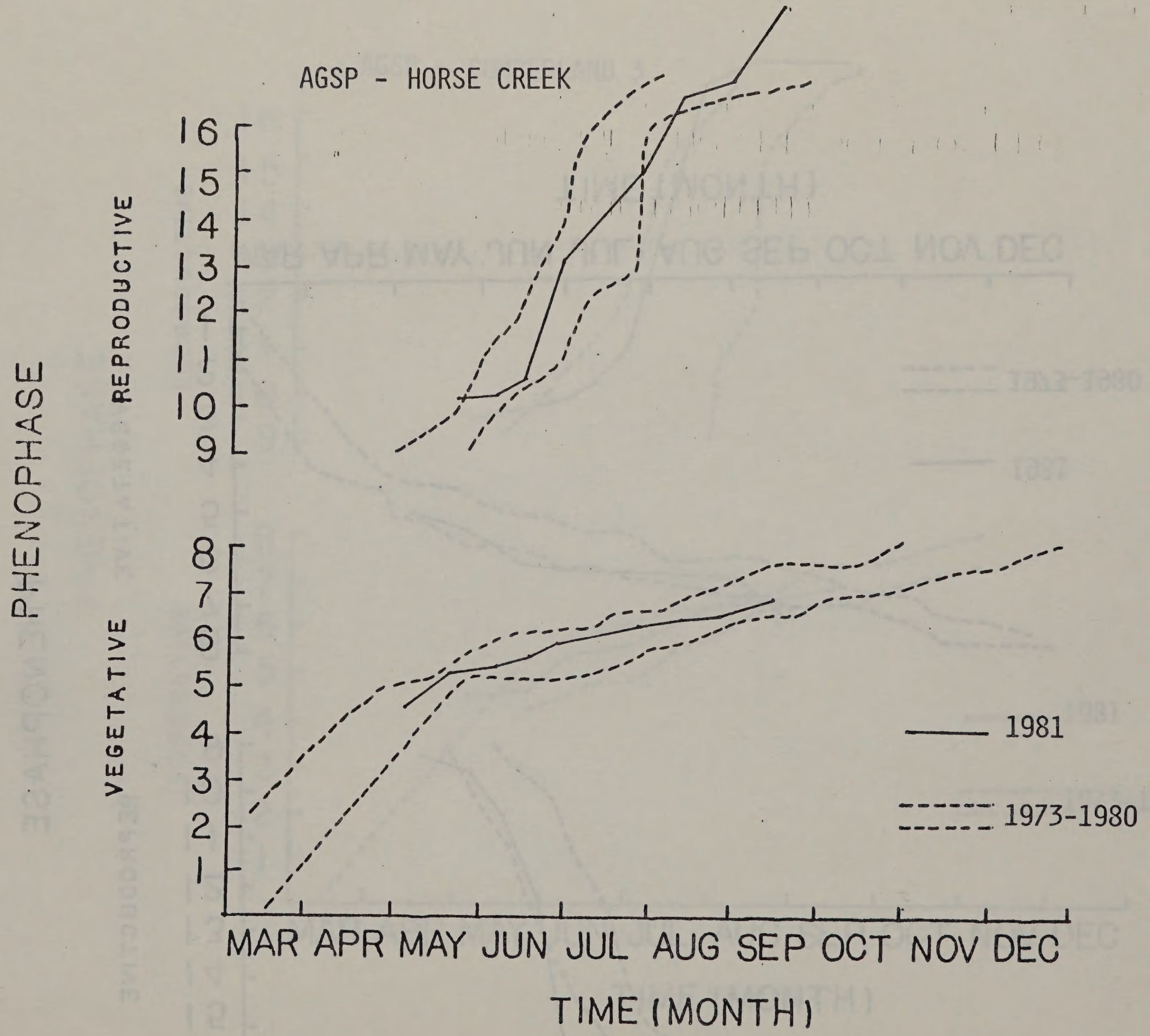
AGSP - HORSE CREEK
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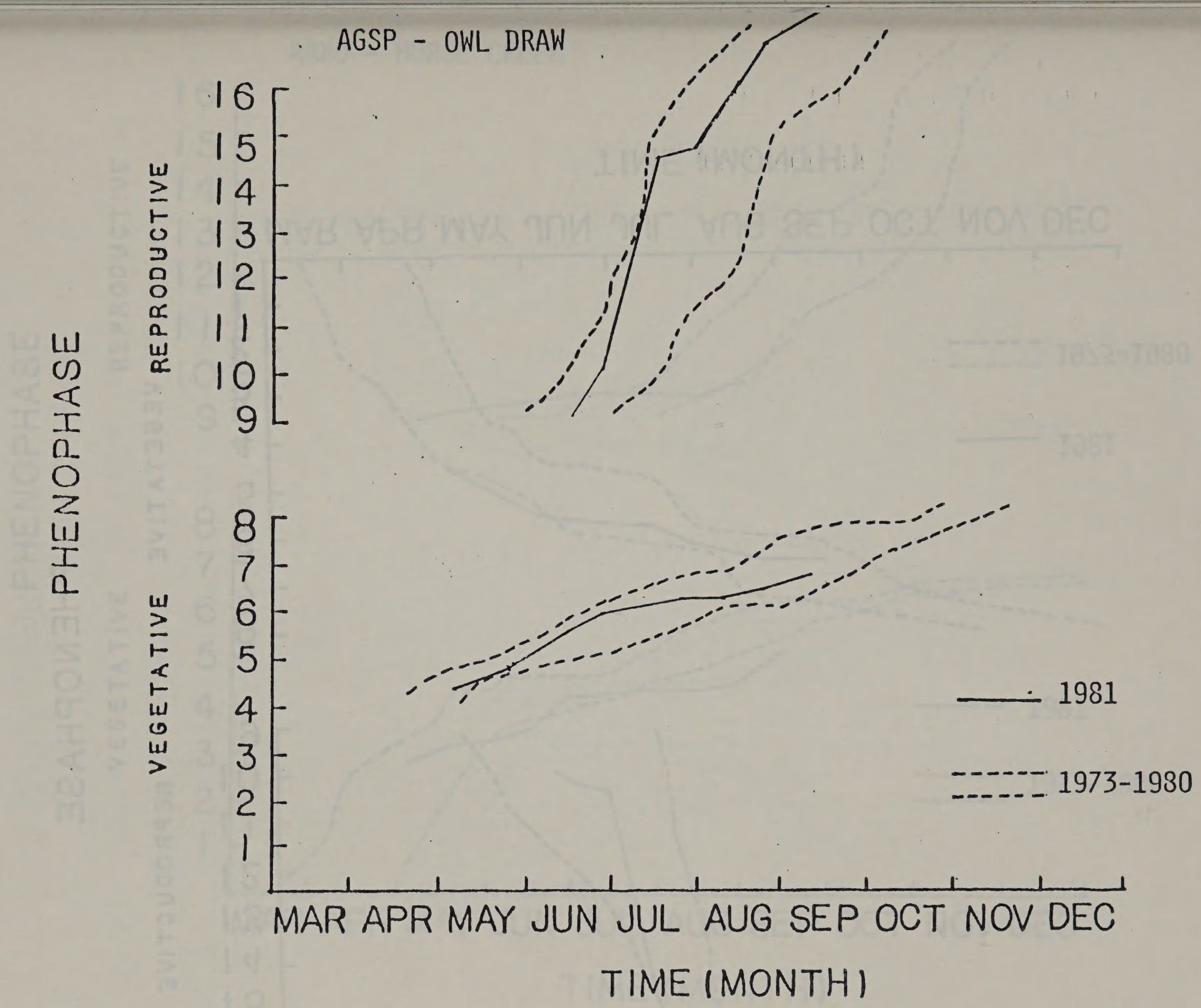
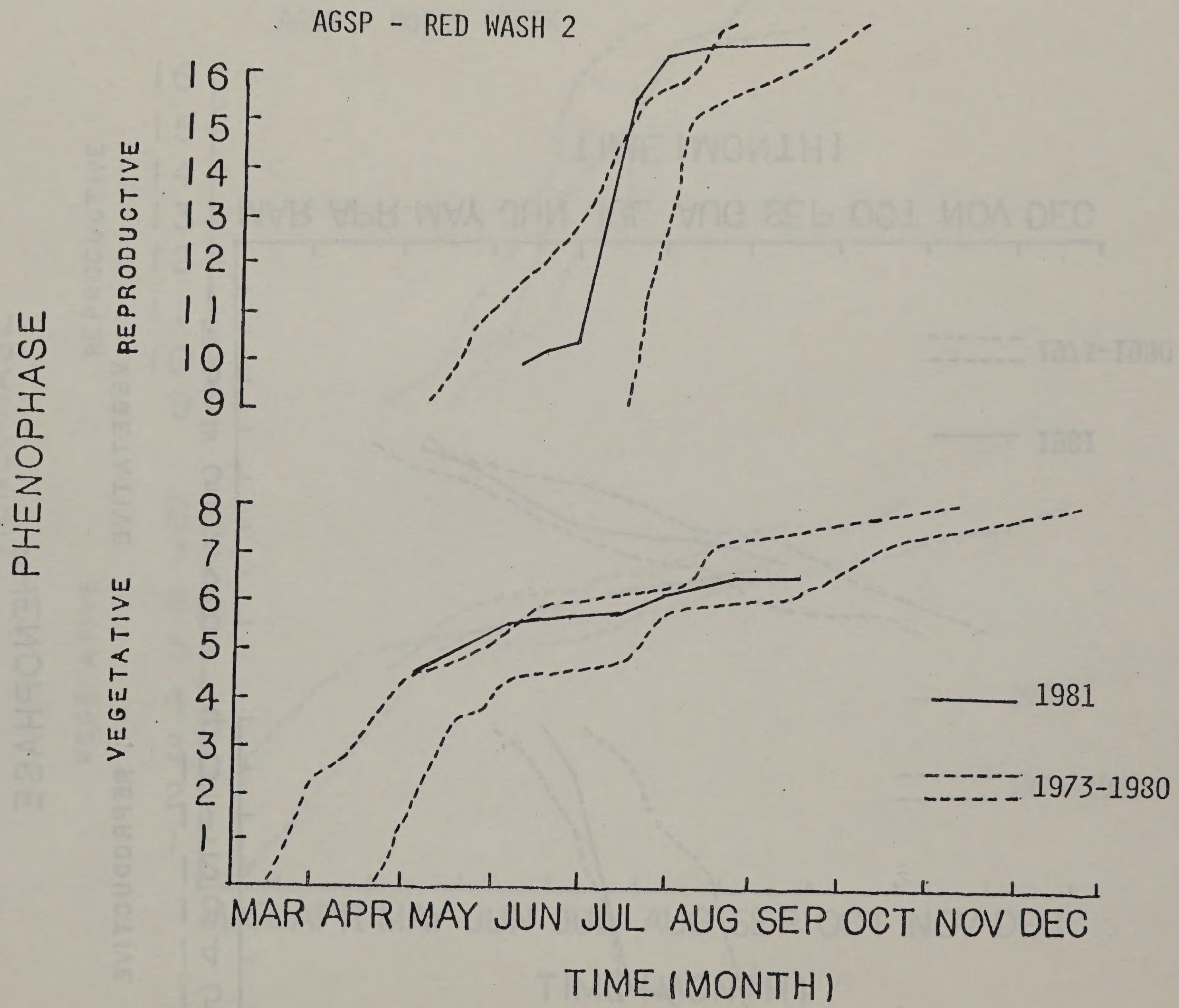
TIME (MONTH)
1981
1973-1980

AGSP - OWL DRAW

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REPRODUCTIVE
VEGETATIVE
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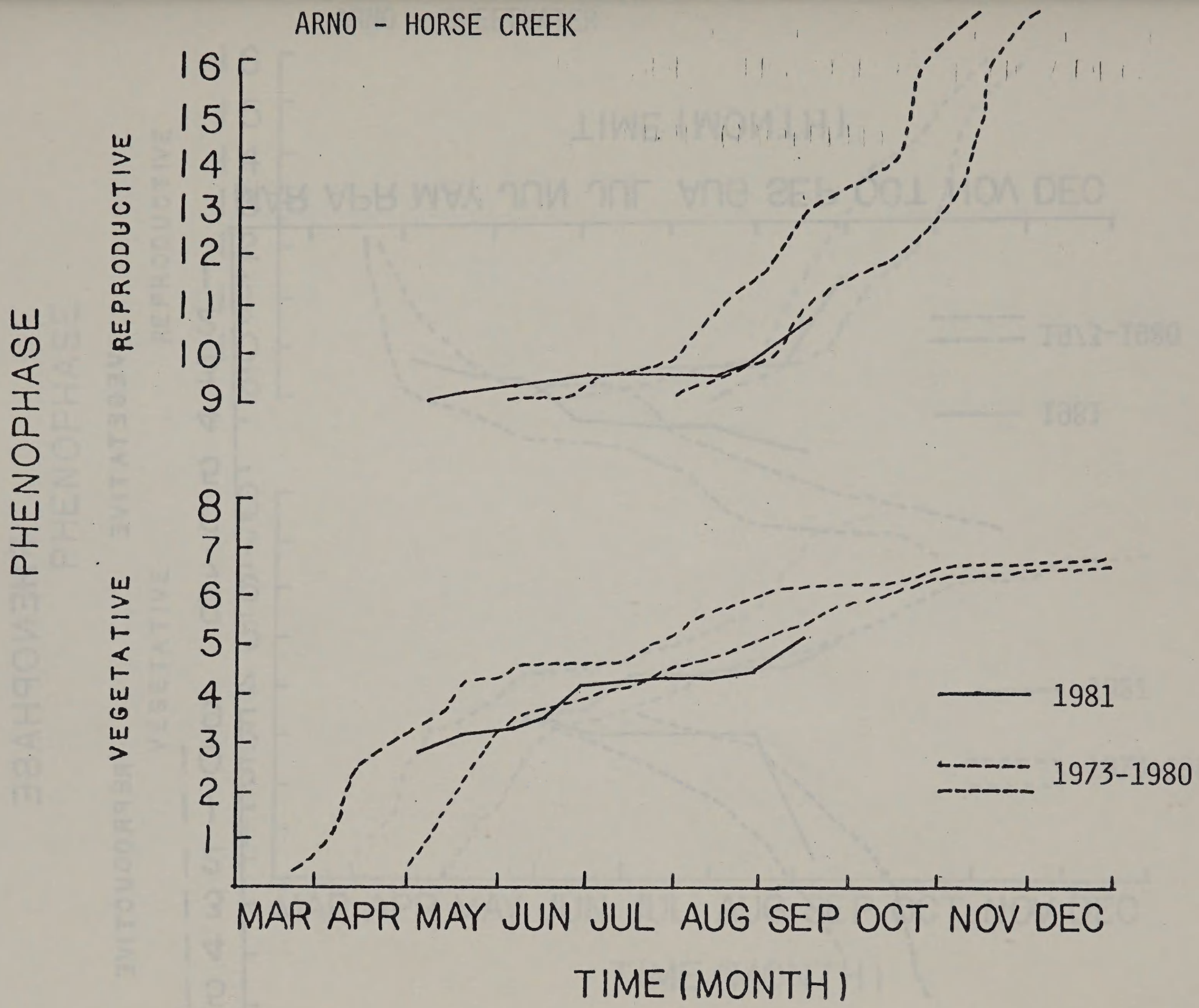
TIME (MONTH)
1981
1973-1980


ARNO - HORSE CREEK
PHENOPHASE
REPRODUCTIVE
VEGETATIVE
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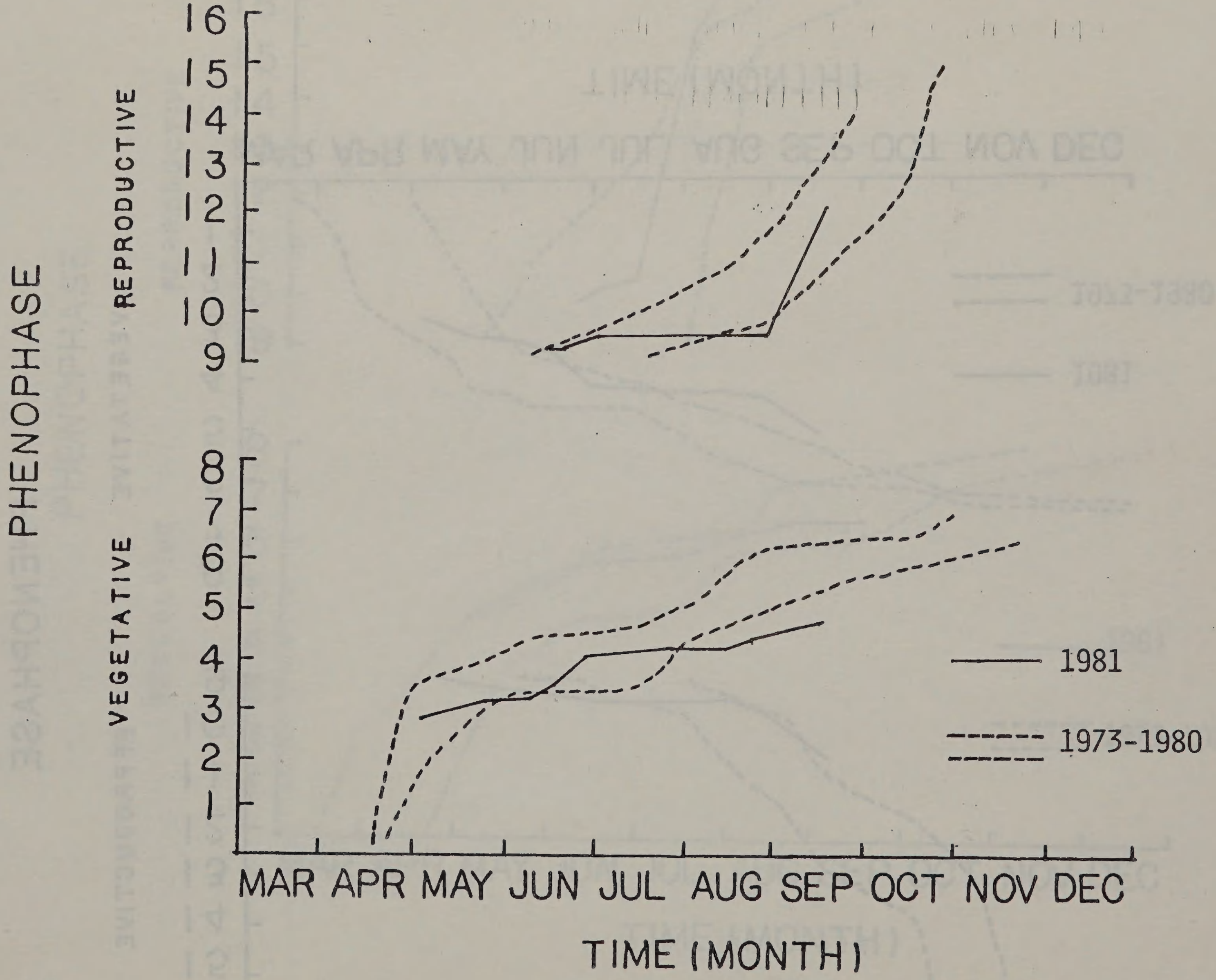
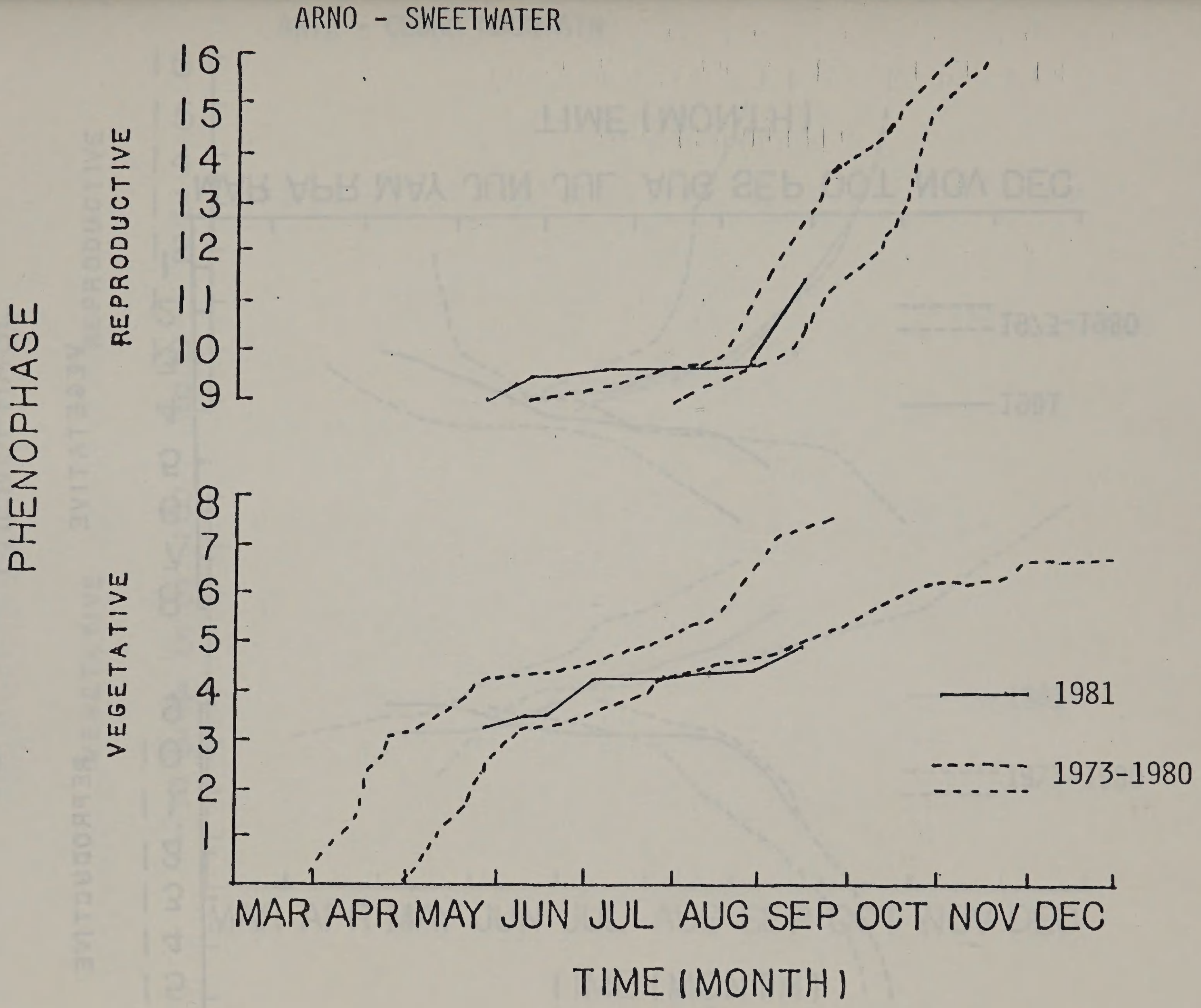
MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
TIME (MONTH)
1981
1973-1980

ARNO - OWL DRAW




ARNO - SWEETWATER
PHENOPHASE
REPRODUCTIVE
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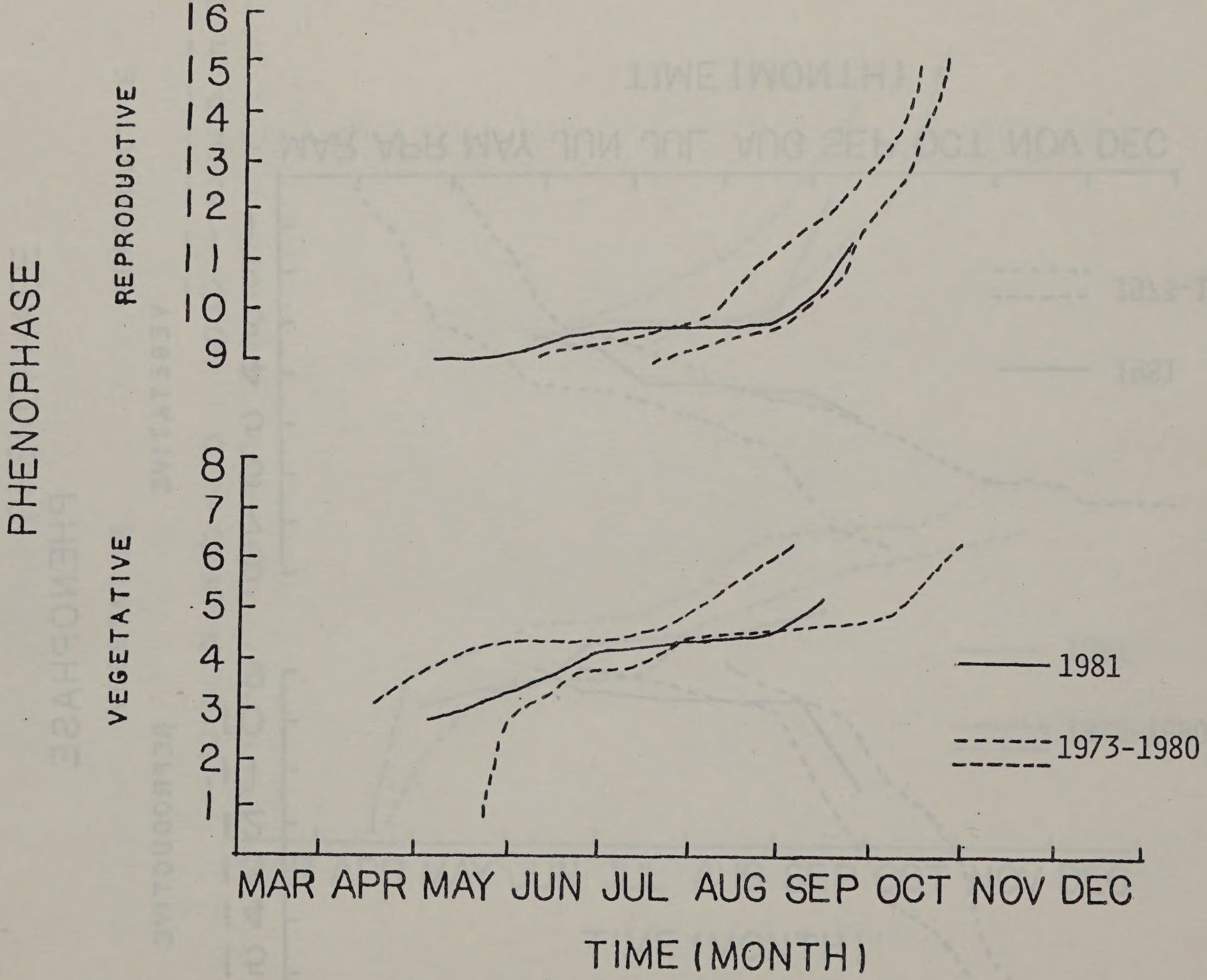
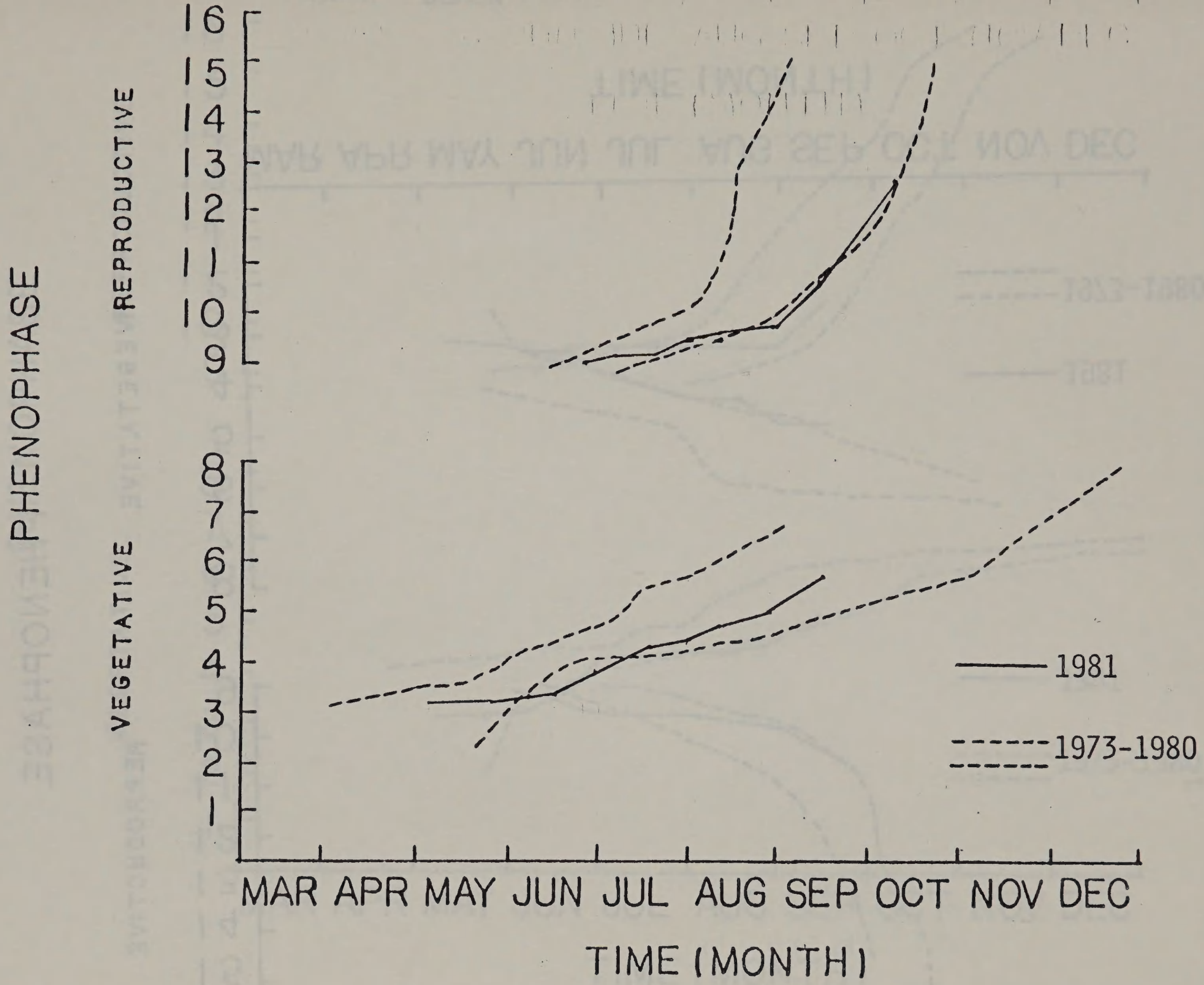
TIME (MONTH)
1981
1973-1980

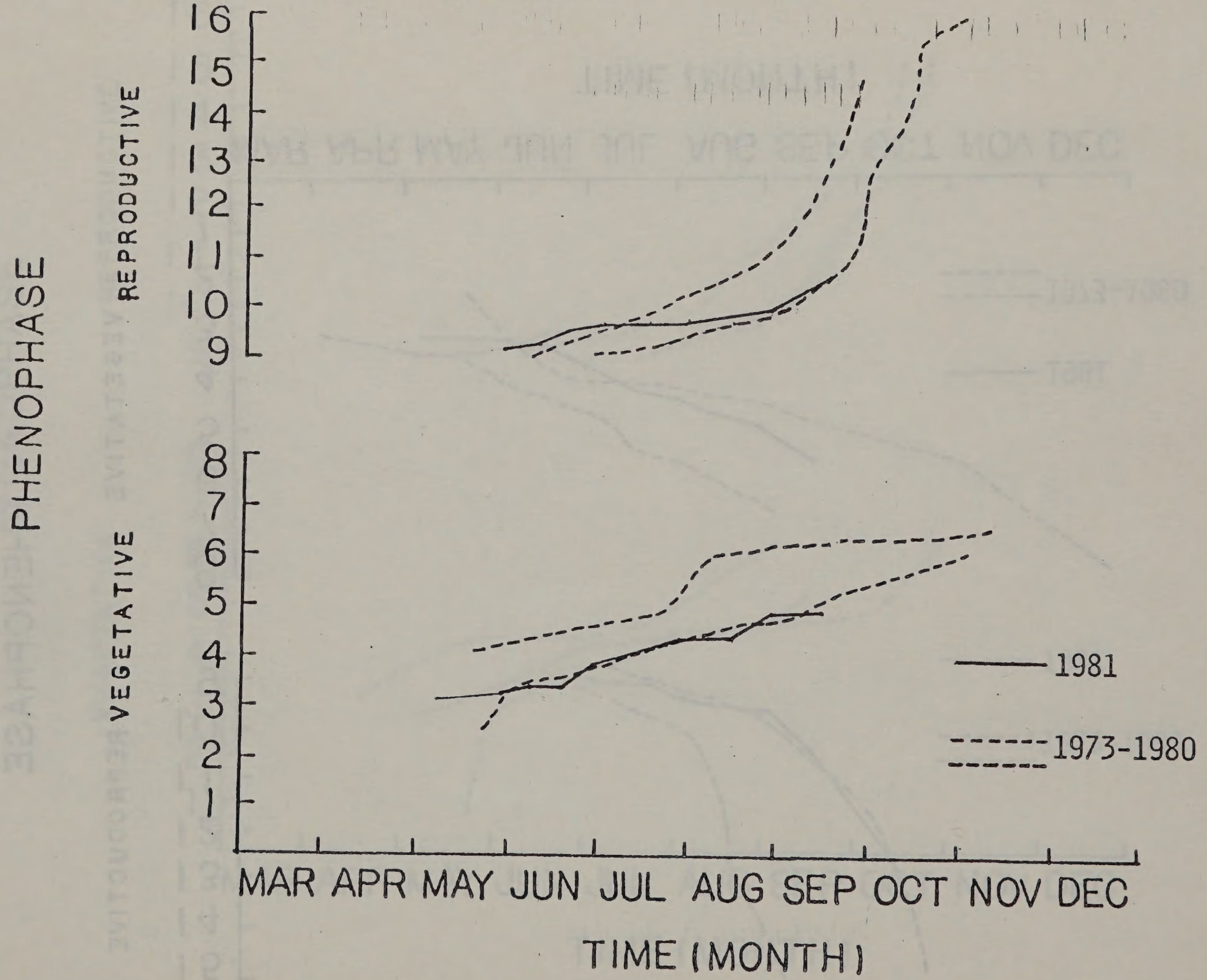


ARTR - BUD KIMBALL

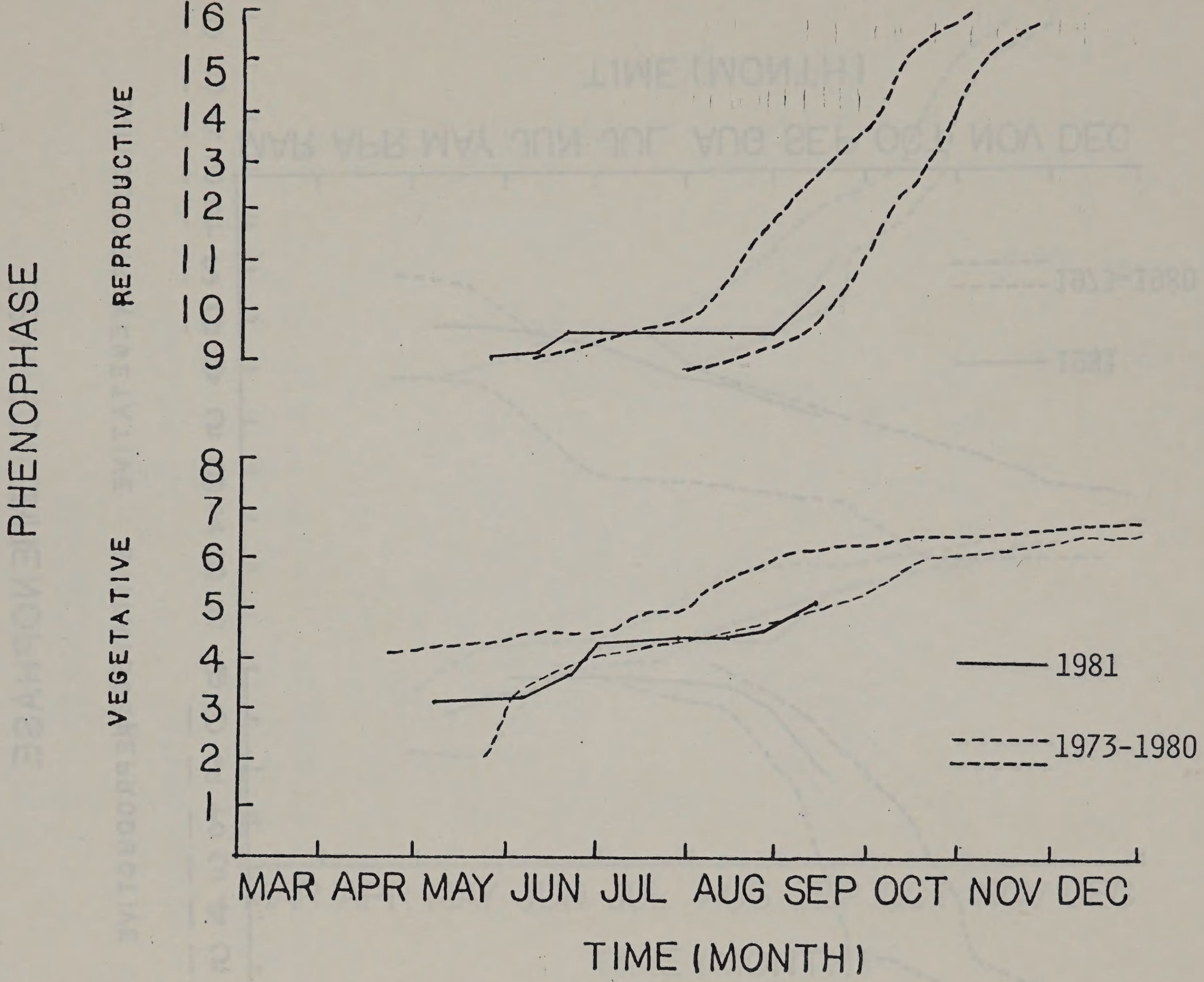
ARTR - CEDAR MOUNTAIN



ARTR - CUMBERLAND 3



ARTR - DEMER


PHENOPHASE
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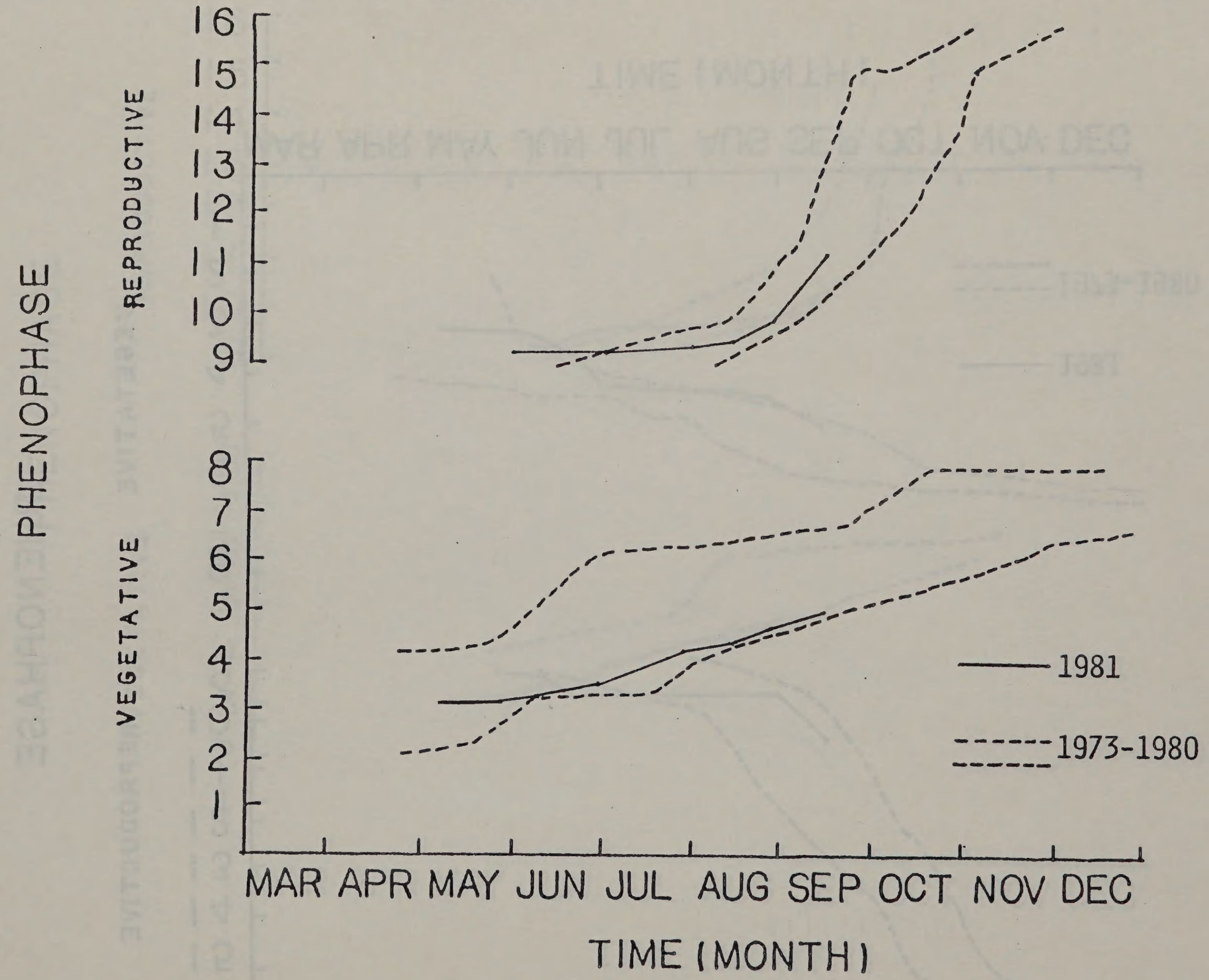
TIME (MONTH)
1981
1973-1980

ARTR - FARSON


PHENOPHASE
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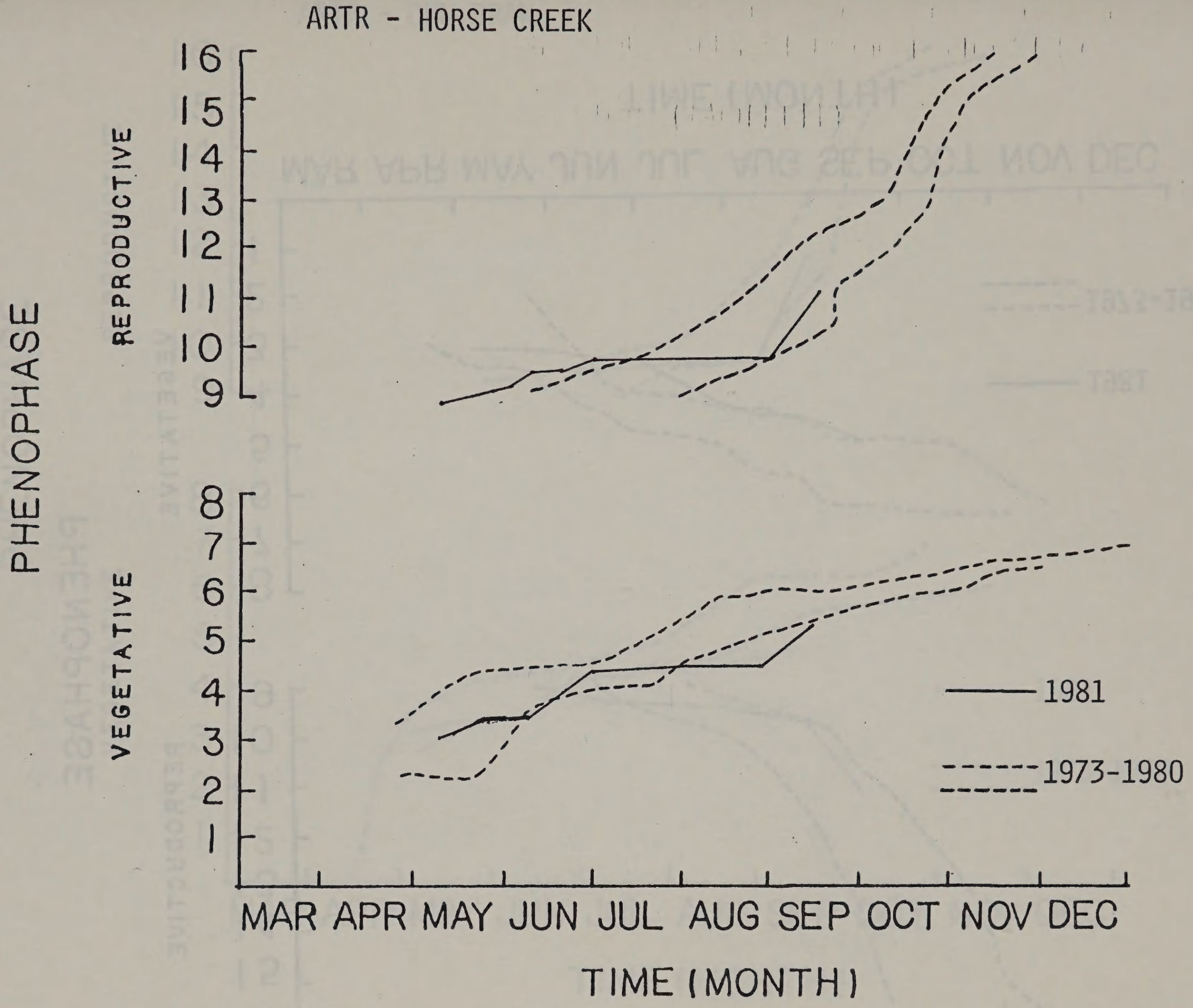
MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
TIME (MONTH)
1981
1973-1980


ARTR - HORSE CREEK
PHENOPHASE
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TIME (MONTH)
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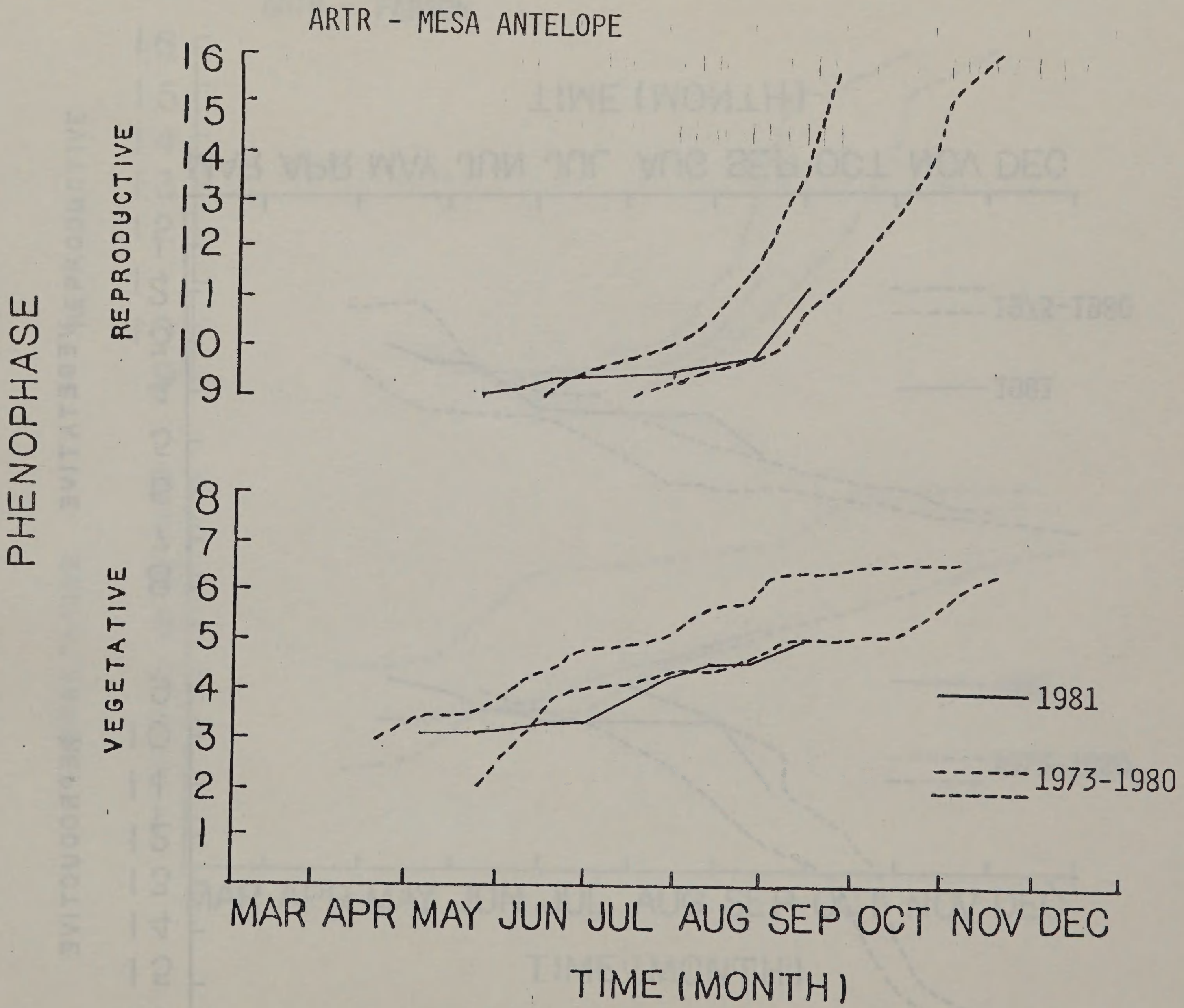
1973-1980


ARTR - MESA ANTELOPE
PHENOPHASE
REPRODUCTIVE
VEGETATIVE
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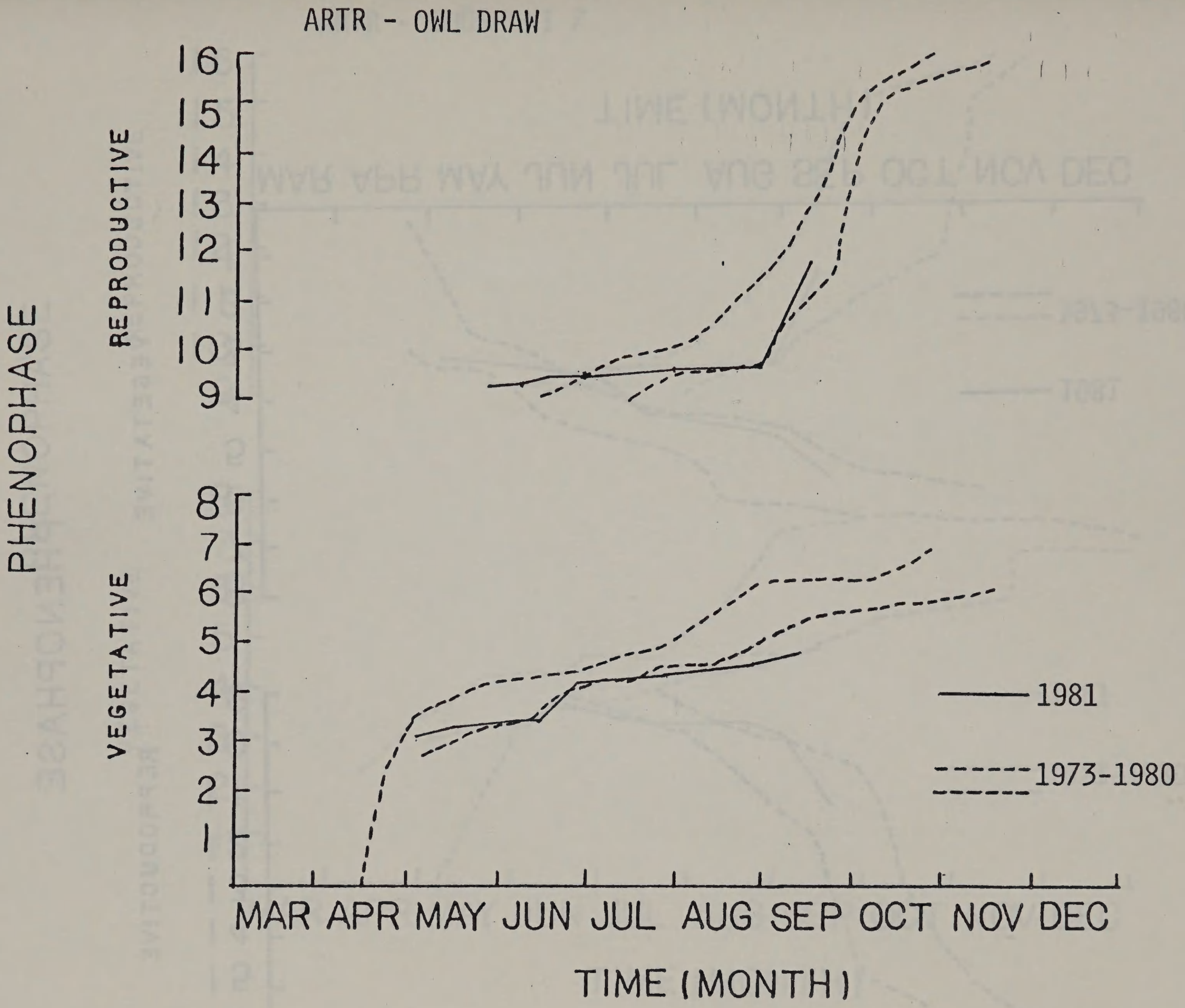
MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
TIME (MONTH)
1981
1973-1980


ARTR - OWL DRAW
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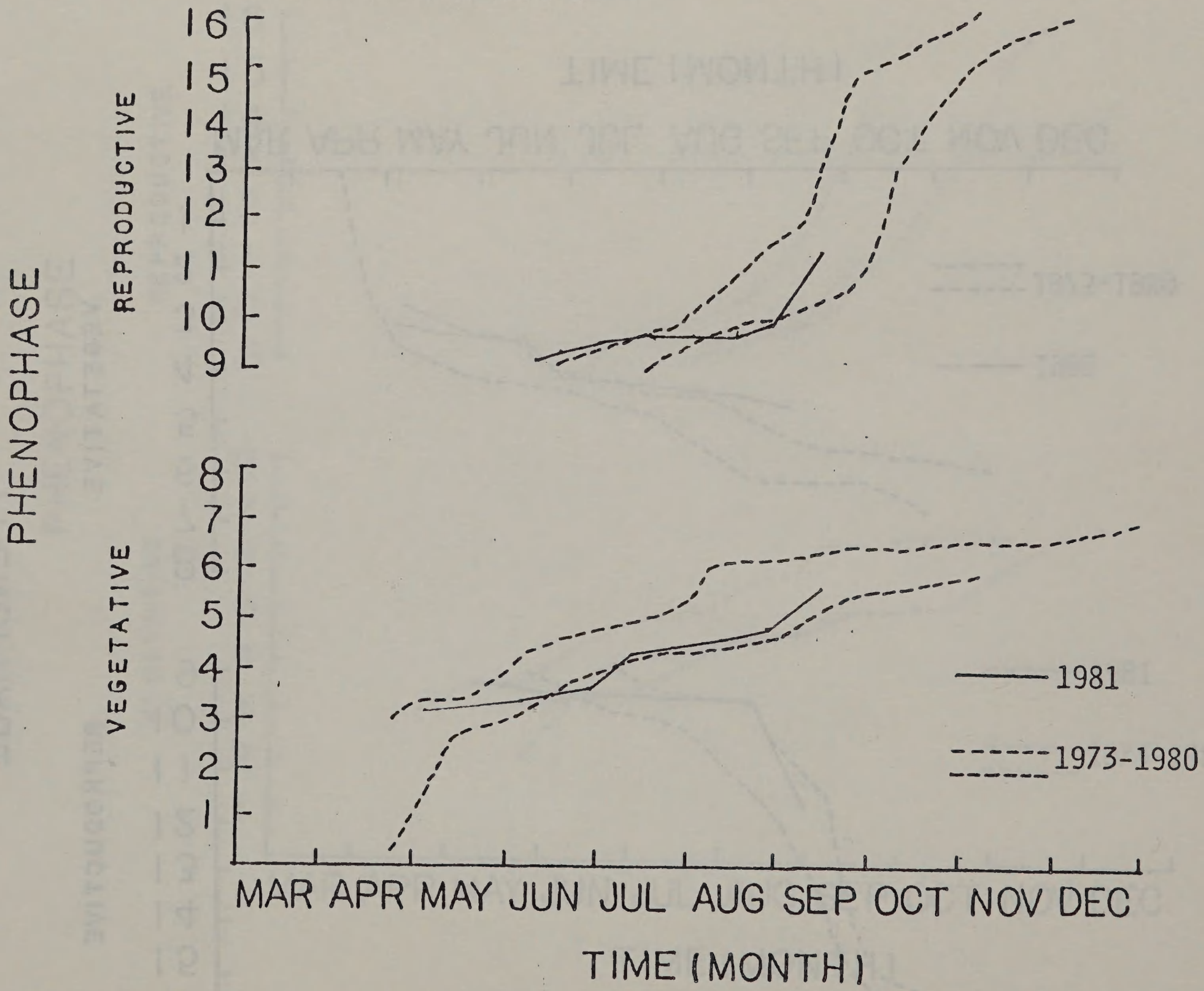
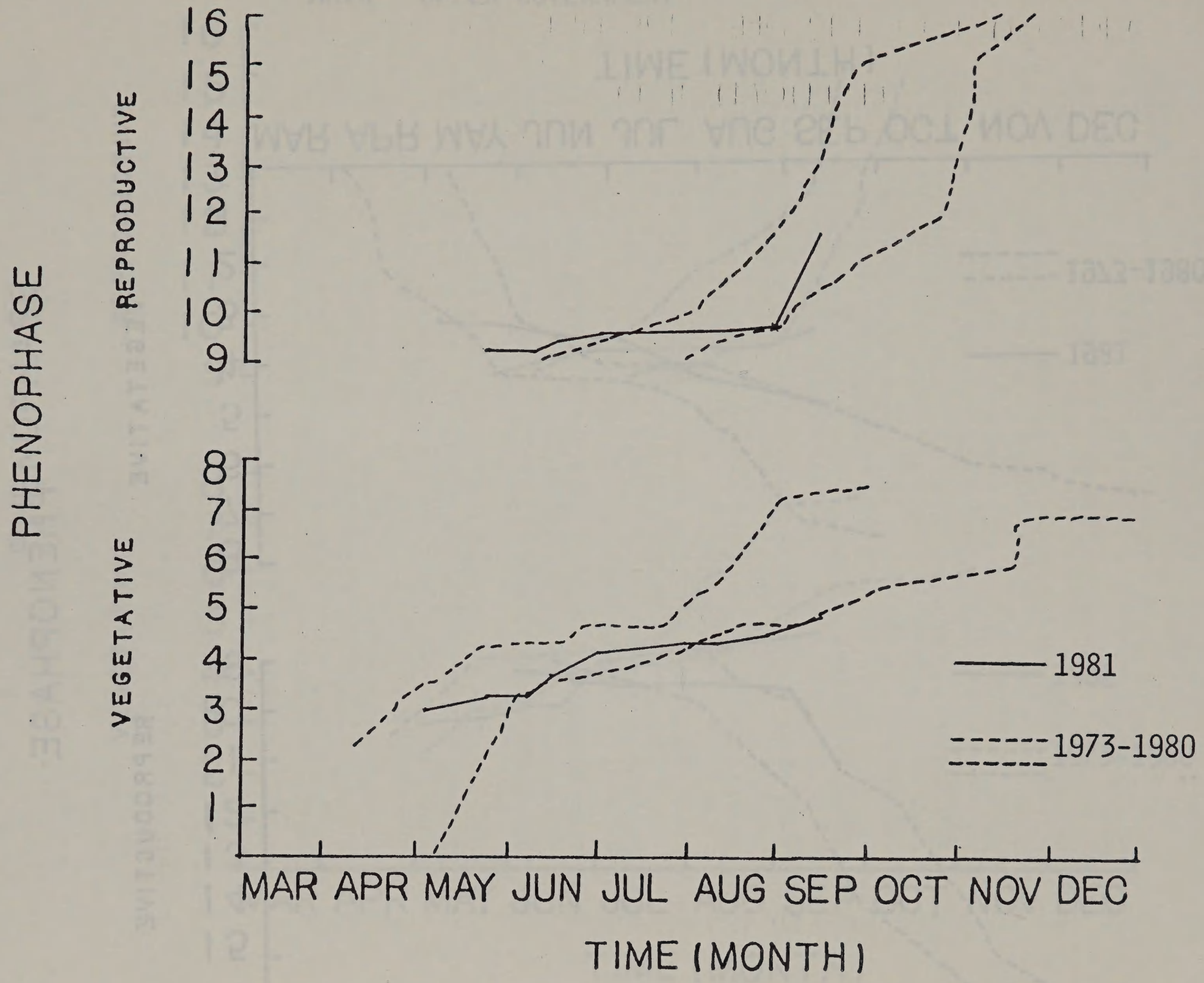
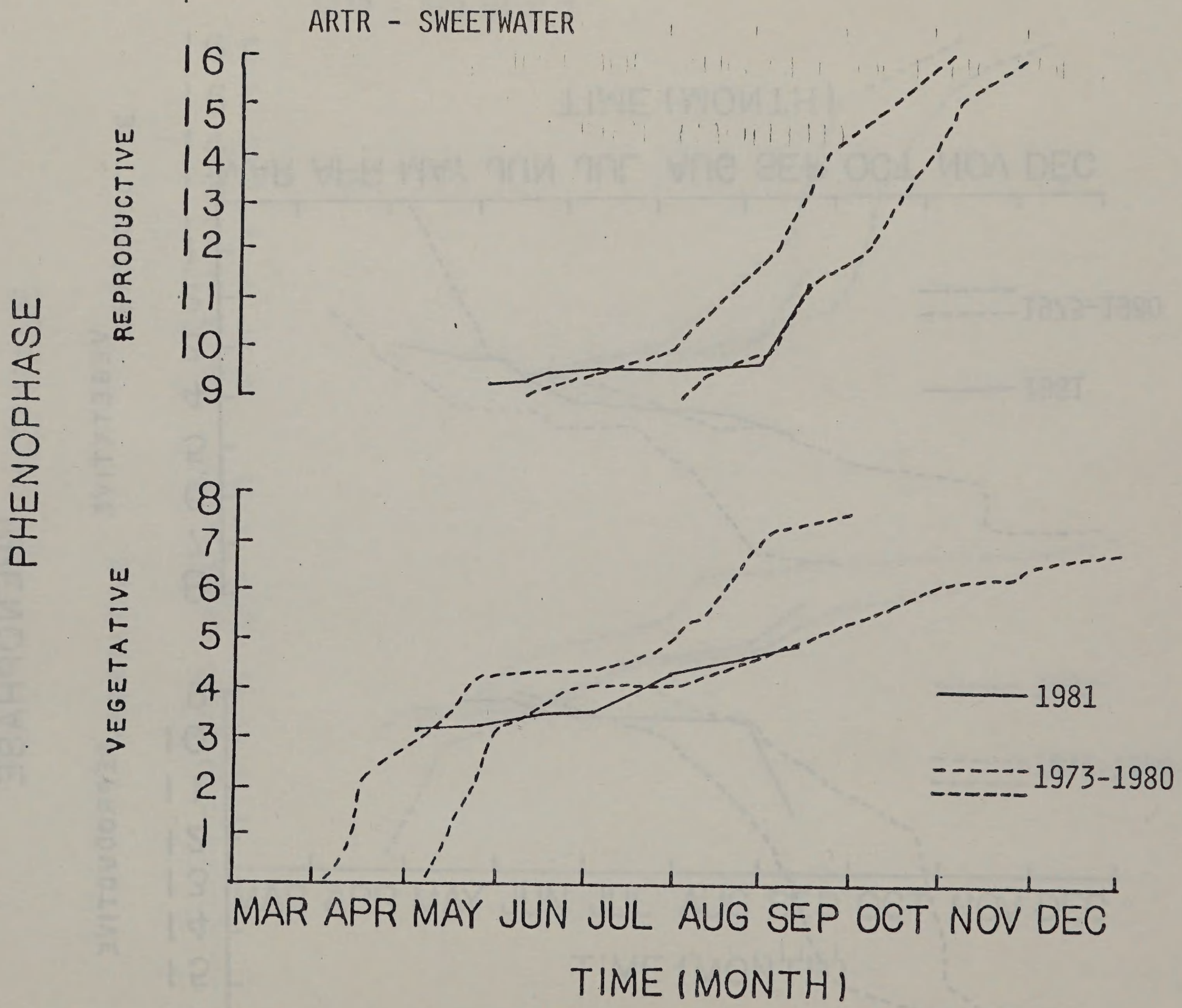
TIME (MONTH)
1981
1973-1980

ARTR - RED WASH 2



ARTR - SHOSHONI 7




ARTR - SWEETWATER
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TIME (MONTH)
1981
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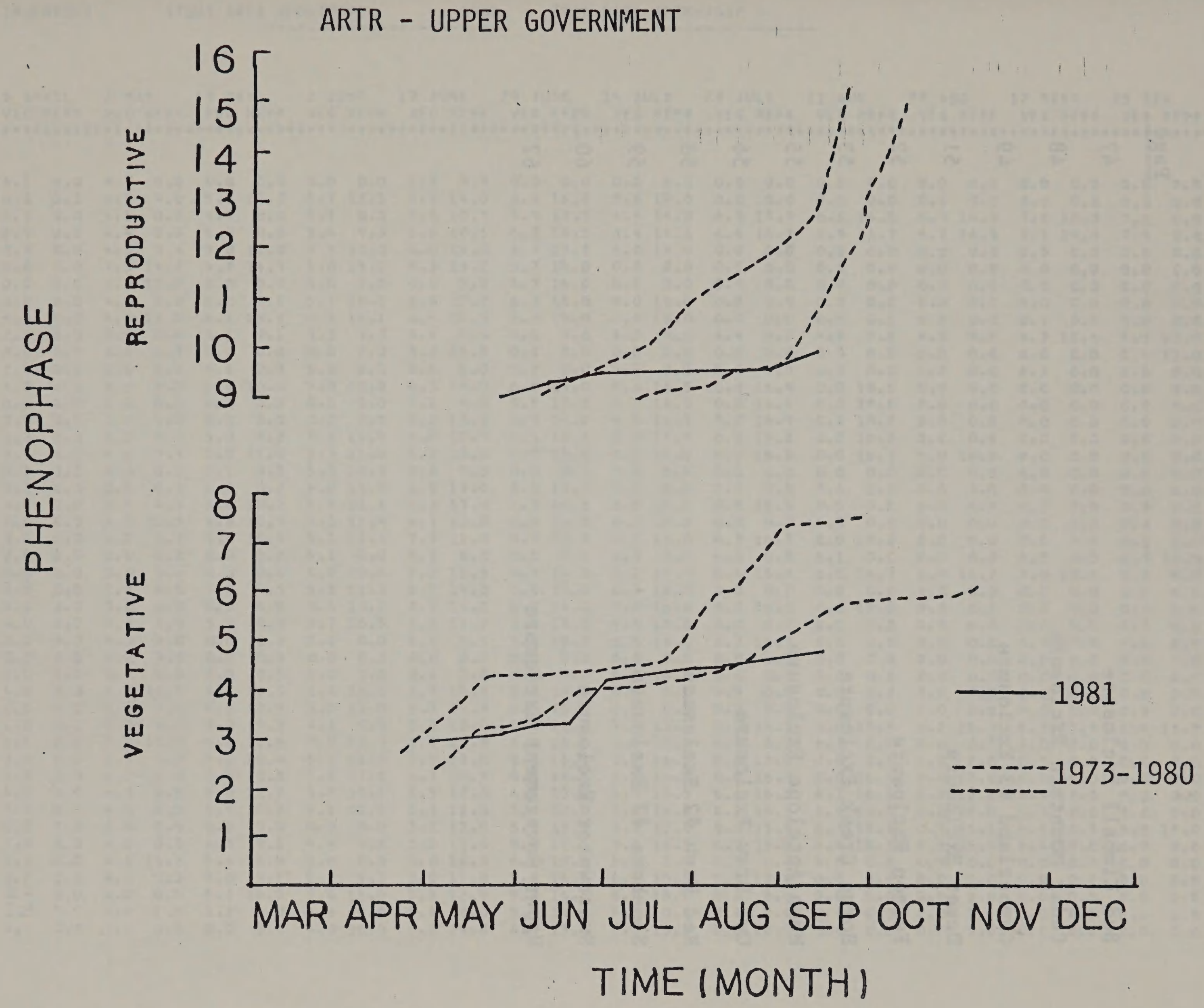
ARTR - UPPER GOVERNMENT
PHENOPHASE
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VEGETATIVE
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TIME (MONTH)
1981
1973-1980

TABLE III. All species phenological survey for 1980 by date for each exclosure.

	Page
Bud Kimball Exclosure	47
Cedar Mountain Exclosure	48
Cumberland #3 Exclosure	49
Demer Exclosure	51
Farson Exclosure	52
Horse Creek Exclosure	53
Mesa Antelope Exclosure	55
Owl Draw Exclosure	56
Red Wash #2 Exclosure	58
Shoshone #7 Exclosure	59
Sweetwater Exclosure	60
Upper Government Exclosure	62

PHENOLOGICAL INVENTORY STUDY AREA BUDKIMBALL 1981 TYPE SITE ARTR-AGSM

		15 APRIL		2 MAY		19 MAY		2 JUNE		17 JUNE		29 JUNE		14 JULY		28 JULY		11 AUG		25 AUG		12 SEPT		25 SEP	
	SPECIES	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VER	REPR
1	AGCR	4.1	0.0	4.7	0.0	0.0	0.0	0.0	0.0	5.2	9.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	AGGL	0.0	0.0	3.9	9.0	5.3	13.0	5.7	13.5	6.5	14.0	6.8	16.8	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	AGSM	4.3	0.0	4.5	0.0	4.9	0.0	5.1	0.0	5.8	10.5	5.9	13.5	6.4	14.0	6.5	15.8	6.6	16.0	6.7	16.9	7.0	18.0	7.6	0.0
4	AGSP	2.9	0.0	4.4	0.0	5.0	9.0	5.4	9.3	6.0	10.5	6.0	16.5	6.4	16.6	6.4	16.7	6.5	16.7	6.7	16.9	7.1	18.0	7.4	0.0
5	ALTE	3.4	0.0	4.5	9.4	5.0	11.0	5.4	13.0	6.0	14.0	6.5	15.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	ANDI	0.0	0.0	4.5	14.2	4.7	14.5	5.0	15.0	5.3	15.2	5.7	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	ANSE	0.0	0.0	4.8	12.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ARFU	0.0	0.0	4.6	9.0	5.2	9.1	5.4	10.5	6.5	12.2	6.7	16.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	ARHO2	4.1	9.0	4.8	13.0	6.1	13.5	6.3	14.0	6.4	14.5	6.6	15.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	ARTR	2.5	0.0	2.8	0.0	3.1	9.1	3.3	9.3	3.8	9.6	4.1	9.6	4.2	9.6	4.4	9.6	4.5	9.6	4.5	9.6	5.2	11.4	5.4	13.0
11	ASPU	0.0	0.0	3.8	9.7	0.0	0.0	0.0	0.0	6.2	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	13.0
12	BOGR	2.0	0.0	3.0	0.0	4.1	0.0	5.3	0.0	5.4	0.0	5.5	0.0	5.7	0.0	5.8	0.0	6.0	0.0	6.2	0.0	6.4	0.0	6.6	0.0
13	BRTE	4.3	0.0	5.0	9.0	5.6	10.4	5.9	12.9	6.3	14.0	6.5	15.0	8.0	16.5	0.0	16.9	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
14	BRJA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	9.8	5.8	12.5	8.0	16.0	0.0	16.4	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
15	CAMI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	13.0	6.5	14.0	6.9	16.5	8.0	16.9	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
16	CANU	3.3	0.0	4.2	0.0	5.0	9.2	5.5	11.5	5.8	12.5	6.1	13.5	8.0	14.5	0.0	15.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
17	CACH	3.4	9.0	4.2	9.8	5.0	11.0	5.3	11.6	5.8	13.0	6.5	15.0	8.0	16.0	0.0	16.5	0.0	16.9	0.0	18.0	0.0	0.0	0.0	0.0
18	CHDE	0.0	0.0	0.0	0.0	5.1	9.2	5.3	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	COPA2	0.0	0.0	0.0	0.0	0.0	0.0	6.0	14.0	6.8	15.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	CRMO	3.7	0.0	4.8	9.5	5.0	10.2	5.4	11.1	6.3	13.5	6.5	16.6	8.0	16.8	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	DEPI	0.0	0.0	4.5	10.5	4.8	10.9	5.3	12.4	6.1	13.0	6.9	16.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	ERPU	3.4	0.0	4.0	9.1	4.8	10.0	5.1	11.4	5.5	11.8	5.9	12.8	6.3	16.0	6.8	16.7	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
23	HAGL	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	4.8	0.0	5.5	0.0	5.9	0.0	6.0	0.0	6.1	0.0	6.3	0.0	6.5	0.0	6.7	11.5
24	KOCR	0.0	0.0	0.0	0.0	0.0	0.0	4.9	10.4	5.2	11.5	5.8	14.3	6.2	15.9	6.4	16.0	6.5	16.7	6.9	16.7	8.0	18.0	0.0	0.0
25	LARE	2.6	0.0	2.1	0.0	3.8	9.5	5.5	11.3	6.2	14.0	6.5	15.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	LEDE	0.0	0.0	0.0	0.0	0.0	0.0	5.4	13.0	5.8	14.0	6.5	15.0	8.0	16.0	0.0	16.5	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
27	LERE	4.0	0.0	5.3	9.0	5.5	9.8	5.7	10.5	5.8	11.2	6.5	13.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	MACA	0.0	0.0	4.3	9.0	0.0	0.0	0.0	0.0	4.8	9.5	5.0	10.5	6.5	15.0	6.7	16.5	0.0	0.0	0.0	0.0	6.9	18.0	8.0	0.0
29	MAGL	3.2	0.0	4.1	9.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0
30	MIGR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	LOOR	4.8	0.0	4.9	11.8	6.1	15.0	6.4	16.0	6.8	16.8	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	OECO	0.0	0.0	0.0	0.0	4.5	10.5	5.0	11.0	5.3	11.8	6.5	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	OPPO	1.0	0.0	3.0	9.0	3.9	9.5	4.3	9.8	5.5	10.0	5.8	12.0	5.9	13.6	5.9	14.5	6.0	15.9	6.2	16.3	6.3	16.5	6.4	16.8
34	PHHO	4.5	0.0	4.5	12.0	4.8	12.8	5.0	13.8	5.8	15.0	6.2	16.0	6.7	18.0	6.9	0.0	6.9	0.0	8.0	0.0	0.0	0.0	0.0	0.0
35	PLPA	0.0	0.0	3.7	0.0	5.2	10.9	5.3	11.5	5.5	13.0	8.0	16.3	0.0	16.6	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	POSE	4.8	9.0	5.0	10.5	5.5	10.8	5.8	11.1	6.1	14.5	6.5	16.5	8.0	16.8	0.0	16.9	0.0	16.9	0.0	18.0	0.0	0.0	0.0	0.0
37	SIHY	4.1	0.0	4.9	0.0	5.0	10.0	5.2	10.6	5.5	12.0	6.1	13.0	6.5	15.5	6.6	16.0	6.7	16.6	6.8	16.8	6.9	18.0	8.0	0.0
38	STVI	3.4	0.0	4.5	0.0	4.9	10.2	5.1	10.6	5.3	11.0	5.4	12.0	6.0	16.2	6.2	16.5	6.4	16.9	6.6	18.0	6.9	0.0	8.0	0.0
39	SPCO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	12.0	5.5	13.5	6.2	15.0	6.3	15.8	6.4	16.0	6.5	16.1	6.6	16.5	6.8	18.0
40	STCO	3.6	0.0	4.0	0.0	4.5	9.1	4.9	9.6	5.0	11.5	5.5	12.5	6.1	16.5	6.3	16.6	6.4	16.8	6.6	16.9	6.9	18.0	6.9	0.0
41	TAOF	3.4	0.0	4.6	14.2	5.4	16.9	5.6	0.0	6.0	18.0	6.2	18.0	6.5	0.0	6.7	0.0	6.8	0.0	6.9	0.0	8.0	0.0	0.0	0.0
42	TRDU	3.2	0.0	4.3	0.0	5.0	9.1	5.2	9.5	5.5	11.8	5.9	14.5	6.1	15.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	VIAM	3.4	0.0	4.0	0.0	5.3	10.5	5.4	11.0	5.8	12.8	5.9	14.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	VINU	3.9	0.0	4.8	11.0	5.2	0.0	5.6	0.0	5.8	18.0	5.9	18.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	VUOC	0.0	0.0	0.0	0.0	0.0	0.0	4.3	10.0	6.2	14.0	6.5	15.5	8.0	16.7	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PHENOLOGICAL INVENTORY STUDY AREA CEDAR MTN 1981 TYPE SITE APTR-AGSP

		1 MAY		27 MAY		4 JUNE		15 JUNE		27 JUNE		13 JULY		27 JULY		10 AUG		25 AUG		13 SEPT		3 OCT			
	SPECIES	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VER	REPR
1	AGCR	4.7	0.0	5.0	9.0	5.3	9.8	5.5	10.0	5.7	10.5	6.0	11.0	6.2	15.0	6.4	16.0	6.8	16.9	6.8	18.0	6.8	18.0	0.0	0.0
2	AGSP	4.7	9.3	4.9	9.5	5.3	9.8	5.4	10.1	5.5	10.6	6.0	14.3	6.4	15.5	6.5	16.5	6.8	16.9	6.8	16.9	6.9	18.0	0.0	0.0
3	ARFR	0.0	0.0	0.0	0.0	5.2	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0	0.0	0.0
4	ARHO2	4.1	0.0	4.7	13.1	5.0	13.5	5.4	14.5	6.5	16.5	6.0	16.9	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	ARSP	3.3	0.0	3.7	10.0	4.0	11.0	4.5	12.5	5.0	13.2	5.2	13.8	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	ARTR	3.0	0.0	3.2	9.1	3.3	9.2	3.4	9.2	3.7	9.6	4.3	9.7	4.3	9.7	4.6	9.8	4.8	9.8	5.5	11.5	5.8	12.8	0.0	0.0
7	ASPU	4.5	9.4	4.9	10.4	5.2	12.0	5.4	14.0	5.7	15.5	5.9	16.0	6.5	18.0	6.8	0.0	6.9	0.0	6.9	0.0	0.0	0.0	0.0	0.0
8	ATCO	3.5	0.0	4.4	0.0	4.6	9.8	5.0	10.0	5.3	13.0	5.5	13.5	5.7	14.0	5.8	14.5	6.2	16.5	6.2	16.8	6.3	16.9	0.0	0.0
9	ATGA	3.3	0.0	4.3	0.0	4.7	12.5	5.0	13.4	5.3	14.0	5.5	14.3	5.7	14.5	5.8	14.9	6.0	16.0	6.1	16.7	6.1	16.9	0.0	0.0
10	CELA	4.4	0.0	4.8	0.0	5.2	9.0	5.2	9.5	5.3	10.0	5.5	10.5	5.8	11.0	5.8	11.7	6.0	13.0	6.5	16.2	6.7	16.5	0.0	0.0
11	CHVI	2.7	0.0	3.9	0.0	4.5	0.0	4.8	0.0	5.1	9.5	5.4	9.8	6.5	10.5	6.6	10.8	6.7	13.5	6.8	16.3	6.8	16.5	0.0	0.0
12	CYMO	4.5	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	5.1	0.0	5.3	9.0	0.0	0.0	0.0	0.0	0.0	0.0
13	EROV	0.0	0.0	4.5	9.8	4.9	9.9	0.0	0.0	0.0	0.0	5.5	0.0	4.5	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	ERPU	0.0	0.0	0.0	0.0	0.0	0.0	6.1	18.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	9.4	4.3	10.5	0.0	0.0	0.0	0.0	5.5	18.0
15	GRSP	0.0	0.0	4.8	0.0	5.0	0.0	5.3	0.0	5.4	0.0	5.7	0.0	5.8	0.0	5.9	0.0	6.5	0.0	6.9	0.0	0.0	0.0	0.0	0.0
16	HAAC	4.2	0.0	4.8	0.0	5.0	12.0	5.3	15.0	5.5	16.0	5.6	16.0	6.2	18.0	6.5	0.0	6.6	0.0	6.8	0.0	6.9	0.0	0.0	0.0
17	HAGL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	5.6	0.0	5.9	0.0	6.2	0.0	0.0	0.0	0.0	0.0
18	KOAM	3.4	0.0	4.5	0.0	5.2	9.0	5.3	9.5	5.5	10.0	5.8	10.4	5.9	10.8	5.9	11.0	6.1	13.0	6.4	16.9	6.5	16.9	0.0	0.0
19	LARE	0.0	0.0	0.0	0.0	5.0	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	MAGR	4.5	9.2	4.9	9.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	18.0	6.5	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	OPPO	1.0	0.0	2.0	0.0	3.8	9.1	4.0	9.3	4.3	10.0	4.5	10.5	5.5	12.0	5.6	13.0	6.0	15.5	6.0	16.3	6.3	16.7	0.0	0.0
22	ORFA	0.0	0.0	0.0	0.0	4.5	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	PEFR	4.6	0.0	0.0	0.0	5.2	11.0	5.3	12.5	6.0	14.5	6.0	15.5	0.0	0.0	6.4	16.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
24	PHHO	4.4	11.2	4.8	12.9	5.2	14.0	5.3	15.1	5.5	16.0	5.8	16.5	6.5	18.0	6.9	0.0	6.9	0.0	8.0	0.0	0.0	0.0	0.0	0.0
25	PHLO	4.2	11.5	4.9	11.8	5.2	12.0	5.3	12.5	5.5	13.0	6.0	16.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	POSE	4.5	0.0	4.9	9.2	5.3	10.2	5.5	12.0	6.0	14.5	6.0	16.5	6.7	16.8	8.0	16.9	7.2	18.0	7.6	0.0	0.0	0.0	0.0	0.0
27	SAVE	0.0	0.0	0.0	0.0	5.0	9.1	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.0	0.0	0.0	0.0	6.4	0.0	8.0	18.0	0.0	0.0
28	SILI	4.4	9.2	5.0	10.4	5.4	10.8	5.5	12.0	5.8	14.0	6.0	15.0	0.0	0.0	0.0	0.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
29	SIHY	4.2	5.1	5.3	0.0	5.3	9.2	5.4	11.2	5.6	13.0	5.7	15.9	6.5	16.5	6.8	16.8	6.9	16.9	6.9	16.9	8.0	18.0	0.0	0.0
30	SIAL	0.0	0.0	0.0	0.0	5.0	10.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	SPCO	4.3	9.0	4.7	9.9	5.2	11.0	5.3	11.5	5.5	13.0	5.7	14.0	0.0	0.0	5.9	14.9	6.3	16.0	0.0	0.0	0.0	0.0	0.0	0.0
32	TAOF	4.2	0.0	0.0	0.0	0.0	0.0	5.5	16.0	5.8	16.9	6.0	16.9	0.0	0.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	TENU	2.6	0.0	4.0	0.0	4.4	0.0	4.8	0.0	5.0	0.0	5.2	0.0	6.3	0.0	6.5	0.0	6.8	0.0	6.9	0.0	8.0	0.0	0.0	0.0
34	TESP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2	16.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	18.0	0.0	0.0
35	TOIN	0.0	0.0	4.4	11.4	5.0	11.8	0.0	0.0	0.0	0.0	5.9	16.9	0.0	0.0	6.7	18.0	6.9	0.0	6.9	0.0	0.0	0.0	0.0	0.0

PHENOLOGICAL INVENTORY   STUDY AREA CUMBERLD 3   1981   TYPE SITE ARTR-AGSM-AGSP

	SPECIES	2 MAY		26 MAY		5 JUNE		16 JUNE		30 JUNE		14 JULY		28 JULY		11 AUG		25 AUG		12 SEPT		4 OCT			
		VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VER	REPR
1	ACLA	4.5	0.0	5.0	0.0	5.1	9.1	5.5	10.1	5.5	10.2	5.8	11.2	0.0	0.0	0.0	0.0	6.8	16.5	6.8	16.7	0.0	0.0	0.0	0.0
2	AGGL	3.7	0.0	5.0	9.8	5.7	12.0	5.8	13.5	6.0	14.0	6.4	16.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	AGSM	4.0	0.0	4.1	0.0	4.9	0.0	5.0	9.3	5.6	10.0	6.0	14.0	6.1	14.5	6.8	16.0	6.8	0.0	6.9	16.9	8.0	18.0	0.0	0.0
4	AGSP	4.5	9.3	4.7	9.6	5.5	10.0	5.5	10.3	5.5	10.3	6.1	15.0	6.3	16.4	6.8	18.0	6.8	0.0	6.8	0.0	8.0	0.0	0.0	0.0
5	AMAL	3.4	0.0	5.0	9.6	5.5	11.5	5.6	12.5	5.7	14.0	5.8	16.5	5.9	0.0	6.0	0.0	6.3	0.0	6.4	0.0	8.0	0.0	0.0	0.0
6	ANDI	4.5	9.2	4.5	11.5	5.5	14.5	5.7	16.0	5.8	16.1	6.0	16.9	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	ANRO	0.0	0.0	0.0	0.0	5.0	11.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ARCO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	16.8	0.0	0.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
9	ARFU	0.0	0.0	0.0	0.0	5.2	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	ARHO2	4.8	9.8	5.5	13.5	5.7	14.0	5.9	14.5	6.0	15.0	6.3	16.4	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	ARTR	3.1	0.0	3.2	9.0	3.4	9.2	3.4	9.2	3.8	9.2	4.2	9.4	4.3	9.6	4.4	9.7	4.8	9.9	4.9	10.7	5.0	12.0	0.0	0.0
12	ASCI	4.6	0.0	4.5	11.5	5.0	14.0	5.2	15.0	5.4	15.2	6.0	16.0	6.4	18.0	6.6	0.0	6.8	0.0	6.9	0.0	0.0	0.0	0.0	0.0
13	ASDI	4.5	0.0	0.0	0.0	5.3	0.0	5.4	0.0	5.5	0.0	5.7	0.0	5.9	18.0	6.0	0.0	6.6	0.0	6.7	0.0	0.0	0.0	0.0	0.0
14	ASPU	0.0	0.0	5.0	16.0	5.5	16.2	5.6	16.6	5.9	16.7	6.5	16.9	6.8	16.9	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	ASMI	4.4	11.2	4.8	11.5	5.0	11.7	5.3	12.6	5.4	12.8	5.8	15.5	6.2	16.8	6.8	18.0	6.9	0.0	6.9	0.0	8.0	0.0	0.0	0.0
16	BRTE	0.0	0.0	0.0	0.0	5.0	10.2	5.5	12.0	6.0	13.0	6.3	15.0	6.7	16.5	8.0	16.9	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
17	CAMI	0.0	0.0	0.0	0.0	5.0	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	CALI	0.0	0.0	0.0	0.0	0.0	0.0	5.1	13.0	5.3	13.1	5.8	15.0	6.5	16.5	6.7	16.8	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
19	CHVI	3.7	0.0	4.5	0.0	4.8	0.0	5.1	0.0	5.3	0.0	5.5	10.0	6.0	10.6	6.0	11.0	6.5	13.5	6.8	0.0	6.9	14.9	0.0	0.0
20	COPA	4.5	9.9	4.9	10.3	5.3	11.3	5.5	13.0	5.5	13.2	5.8	15.0	6.0	15.8	6.1	16.0	6.5	16.9	6.9	18.0	0.0	0.0	0.0	0.0
21	COPA2	0.0	0.0	4.5	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	CORA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2	9.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	CRAC	4.2	0.0	5.5	0.0	5.7	0.0	5.8	13.0	5.9	13.1	6.1	16.0	6.8	18.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	CRFL	0.0	0.0	5.1	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	CYMO	0.0	0.0	5.2	12.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	DEPI	3.3	0.0	4.5	10.1	5.3	12.8	5.5	13.2	5.6	13.8	5.9	15.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	ERCA	0.0	0.0	0.0	0.0	5.0	11.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	ERI	0.0	0.0	4.9	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	ERMI	4.0	0.0	4.2	0.0	4.7	0.0	5.0	0.0	5.2	9.5	5.6	9.8	5.7	10.2	5.9	10.4	6.2	13.0	6.6	0.0	6.7	18.0	0.0	0.0
30	FRAT	0.0	0.0	4.7	12.5	5.7	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	18.0	8.0	0.0	0.0	0.0
31	KOCR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	16.2	6.4	16.5	6.7	16.9	6.9	18.0	0.0	0.0	0.0	0.0
32	LARE	0.0	0.0	0.0	0.0	5.0	11.5	5.3	13.0	5.5	13.4	6.0	16.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	LERE	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	LOSI	4.7	9.8	5.0	11.5	5.2	11.8	5.3	12.5	0.0	0.0	6.5	16.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35	LASC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	5.4	10.2	0.0	0.0	0.0	0.0
36	MELO	4.9	11.8	5.0	12.5	5.5	13.5	5.7	14.0	5.9	14.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	MUDI	0.0	0.0	5.2	12.5	5.4	14.0	5.9	16.0	6.0	16.3	6.8	16.9	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	OPPO	1.0	0.0	2.0	9.0	3.0	9.1	3.5	9.5	3.8	9.8	4.0	9.9	4.8	13.0	5.0	14.1	5.9	15.5	6.0	16.3	0.0	0.0	0.0	0.0
39	ORHY	3.2	0.0	4.7	0.0	4.9	0.0	5.2	10.0	5.3	10.3	5.8	12.0	6.0	13.5	6.2	15.0	6.6	16.6	6.7	18.0	6.9	0.0	0.0	0.0
40	PHHO	4.7	11.4	5.0	12.0	5.5	14.0	5.6	15.0	5.8	15.5	6.5	16.9	6.7	18.0	6.0	0.0	6.9	0.0	6.9	0.0	8.0	0.0	0.0	0.0
41	PHMU	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	0.0	6.9	0.0	8.0	0.0	0.0	0.0
42	PHLO	4.5	0.0	5.0	10.5	5.2	11.5	5.4	12.5	5.5	12.7	6.0	16.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	POAM	4.2	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	POFE	4.4	9.8	5.0	10.5	5.1	10.6	5.4	12.0	5.5	12.3	6.0	15.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	POSE	6.4	16.7	6.6	18.0	6.7	0.0	6.9	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	SEIN	0.0	0.0	4.9	11.0	5.5	11.8	5.7	13.4	0.0	0.0	0.0	0.0	8.0	16.8	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	SIAL	0.0	0.0	0.0	0.0	5.0	10.2	5.3	13.0	5.4	13.2	6.0	15.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	SILI	4.4	9.5	4.7	10.5	5.0	11.8	5.2	12.8	5.4	13.0	6.1	16.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	SIHY	4.8	0.0	5.0	9.1	5.2	9.6	5.3	10.0	5.4	10.3	6.3	16.0	6.5	16.8	6.8	16.9	6.9	16.9	6.9	18.0	8.0	0.0	0.0	0.0
50	STCO	3.4	0.0	5.2	0.0	5.3	9.6	5.5	10.3	5.5	12.0	6.0	15.0	6.3	16.5	6.5	16.8	6.7	18.0	6.9	18.0	8.0	0.0	0.0	0.0

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52  SYOC     3.5  0.0   4.6  0.0   5.2  9.5   5.3 10.0   5.5 10.1   5.7 10.0   6.4 18.0   6.8  0.0   8.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
53  TAOF     4.6 10.1   4.9 12.5   5.5 12.8   5.7 14.0   5.9 15.0   6.0 16.0   6.4 18.0   6.8  0.0   8.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
54  TECA     3.5  0.0   4.7  0.0   5.0  9.0   5.2  9.4   5.4  9.5   5.6 11.0   5.7 11.3   5.8 11.6   6.0 13.5   6.2 14.5   6.5 14.7   0.0  0.0
55  THAR     0.0  0.0   0.0  0.0   5.0 10.2   5.3 12.0   5.4 12.6   6.3 15.0   8.0 18.0   0.0  0.0   0.0  0.C   0.0  0.0   0.C  0.0   0.0  0.0
56  TRDU     0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   5.3 10.2   6.0 14.1   6.8 16.8   8.0 18.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
57  TRGY     4.2  0.0   5.0 12.0   5.5 13.5   5.7  0.0   5.9  0.0   6.1  0.0   6.2 18.0   8.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
58  VINU     5.1  7.0   5.0 12.8   5.7 16.0   5.9  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.C   0.0  0.0   0.0  0.0   0.C  0.0
59  ZIPA     4.6  0.0   5.0   .5   5.5  2.0   5.6  3.5   6.0  4.0   6.4  6.9   6.8  8.0   6.9  0.0   8.0  0.0   0.0  0.C   0.C  0.0   0.C  0.0
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PHENOLOGICAL INVENTORY   STUDY AREA DEMER   1981   TYPE SITE ARTR-AGSM

	SPECIES	15 APR		2 MAY		20 MAY		2 JUNE		17 JUNE		29 JUNE		14 JULY		28 JULY		11 AUG		24 AUG		12 SEPT		25 SEP	
		VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
1	AGSM	3.8	0.0	4.7	0.0	5.3	0.0	5.4	0.0	6.1	11.5	6.0	13.0	6.2	14.0	6.5	16.5	6.5	16.7	6.7	0.0	7.0	18.0	7.5	0.0
2	AGSP	4.2	0.0	4.9	9.0	5.5	9.5	5.8	10.6	6.1	13.5	6.2	16.7	6.0	16.3	6.3	16.5	6.3	16.7	6.5	16.7	7.2	18.0	7.6	0.0
3	ALTE	3.3	9.0	4.5	9.8	5.5	13.5	5.7	13.9	6.0	14.0	6.5	14.5	6.7	15.8	8.0	16.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
4	ARTR	2.6	0.0	3.1	0.0	3.3	9.1	3.3	9.2	3.8	9.5	4.3	9.5	4.4	9.5	4.4	9.6	4.4	9.6	4.5	9.6	5.1	10.5	5.3	12.0
5	ASGR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	11.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	12.0
6	ASMI	2.6	0.0	3.4	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	12.0
7	BOGR	2.5	0.0	4.8	0.0	5.2	0.0	5.3	10.0	5.5	11.0	5.6	11.4	5.7	11.5	6.0	14.0	6.2	15.5	6.3	16.0	6.4	16.8	6.7	18.0
8	BRTE	4.2	0.0	5.6	10.3	5.7	12.0	5.9	12.9	6.5	14.0	6.7	15.5	6.7	15.8	8.0	16.1	8.0	16.4	0.0	16.7	0.0	18.0	0.0	0.0
9	CANU	3.3	0.0	4.5	0.0	0.0	0.0	0.0	0.0	5.2	11.6	6.0	13.0	6.5	14.5	6.8	15.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
10	CAAN	0.0	0.0	4.5	9.8	5.7	11.5	5.8	11.8	5.9	12.0	6.2	13.0	8.0	14.5	0.0	14.9	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
11	CHLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	11.0	5.0	12.0	6.0	13.0	6.0	14.0	6.0	14.0	6.0	15.0	6.0	16.0	8.0	18.0
12	CHNA	0.0	0.0	0.0	0.0	4.8	0.0	5.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	5.6	0.0	5.9	0.0	5.9	0.0	6.0	0.0	6.3	0.0
13	CYMO	4.4	9.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0
14	DEGE.	3.5	0.0	4.4	9.2	5.3	9.8	5.5	11.5	6.2	13.5	6.5	14.0	6.5	14.5	6.8	15.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
15	DEPI	0.0	0.0	4.3	11.3	5.3	11.8	5.7	13.0	5.9	13.5	6.3	15.2	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	ERPU	3.3	0.0	0.0	0.0	5.2	9.8	5.6	11.5	5.7	12.0	5.8	14.5	5.9	15.8	6.0	16.2	6.3	18.0	6.6	0.0	6.8	0.0	8.0	0.0
17	EUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	12.5	5.7	12.9	5.8	14.0	5.9	14.5	6.0	15.2	0.0	0.0
18	GIPU	0.0	0.0	0.0	0.0	5.5	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	KOCR	0.0	0.0	4.5	0.0	5.2	10.5	5.6	11.2	5.7	12.0	5.8	14.5	6.0	16.0	6.1	16.3	6.2	16.3	6.4	16.5	6.6	18.0	6.7	0.0
20	LASE	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	14.5	8.0	15.0	0.0	15.9	0.0	16.9
21	LARE	1.0	0.0	4.3	10.4	5.5	11.0	5.7	11.5	5.8	14.0	5.9	15.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	LEDE	0.0	0.0	4.2	10.1	5.7	13.0	5.8	13.4	6.2	14.2	6.3	15.8	6.9	15.9	8.0	16.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
23	LCOR	0.0	0.0	4.8	11.6	5.2	0.0	0.0	0.0	6.3	18.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	LUPU	1.0	0.0	3.4	0.0	4.5	10.0	5.0	11.0	5.2	11.8	6.0	14.5	8.0	16.0	0.0	16.2	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
25	MACA	0.0	0.0	3.3	0.0	4.5	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	MONU	0.0	0.0	0.0	0.0	5.5	11.5	0.0	0.0	5.7	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	OPPO	1.0	0.0	4.1	9.1	4.8	9.7	5.2	10.0	5.4	11.2	5.6	13.8	5.6	13.9	5.7	14.5	5.8	14.8	5.9	16.3	6.1	16.8	6.3	18.0
28	ORHY	3.7	0.0	4.8	9.0	5.2	9.2	5.7	10.5	5.8	11.8	5.9	14.0	6.1	14.5	6.3	16.1	6.3	16.2	6.3	16.5	6.5	18.0	6.8	0.0
29	PHHO	4.5	11.6	5.2	12.8	5.5	13.5	5.8	15.0	6.2	18.0	6.3	0.0	6.4	0.0	6.8	0.0	6.9	0.0	8.0	0.0	0.0	0.0	0.0	0.0
30	PLPA	2.8	0.0	3.4	0.0	5.7	11.5	5.9	12.0	5.9	13.0	6.0	13.5	6.1	13.8	6.8	16.0	8.0	16.2	0.0	16.8	0.0	18.0	0.0	0.0
31	POSE	4.4	9.0	5.2	10.7	5.5	11.2	5.8	12.2	6.0	14.8	6.2	15.7	6.4	16.0	8.0	16.9	0.0	16.9	0.0	18.0	0.0	0.0	0.0	0.0
32	SIAL	3.2	0.0	3.9	10.0	5.0	11.5	5.7	12.0	5.9	13.0	6.0	13.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	SIHY	4.2	0.0	5.4	9.2	5.2	10.0	5.5	11.3	5.7	12.0	5.8	13.5	5.9	14.5	6.0	15.1	6.5	16.1	6.7	16.4	6.8	16.8	6.9	18.0
34	SPCO	2.9	0.0	3.4	0.0	4.0	0.0	4.6	0.0	5.2	0.0	5.5	0.0	5.6	0.0	5.7	0.0	6.1	0.0	6.2	0.0	6.4	0.0	6.8	0.0
35	STCO	3.4	0.0	4.7	9.2	4.9	10.2	5.4	11.8	5.6	12.5	5.8	14.0	6.0	15.0	6.1	16.4	6.1	16.6	6.3	16.9	6.5	18.0	6.7	0.0
36	TAOF	3.3	9.0	4.6	11.3	5.8	16.9	5.9	16.9	5.9	18.0	6.0	0.0	6.1	18.0	6.1	0.0	6.1	0.0	6.2	0.0	6.4	0.0	8.0	0.0
37	TRDU	0.0	0.0	4.3	0.0	5.0	11.0	5.5	11.6	5.7	12.0	5.9	15.0	6.0	16.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	VUOC	0.0	0.0	4.5	10.5	5.5	11.0	5.6	11.5	6.5	14.5	6.8	16.0	8.0	16.5	0.0	16.6	0.0	16.7	0.0	16.8	0.0	18.0	0.0	0.0

PHENOLOGICAL INVENTORY STUDY AREA FARSON 1981 TYPE SITE ARTR-AGSM

		2 MAY		26 MAY		5 JUNE		16 JUNE		30 JUNE		14 JULY		28 JULY		11 AUG		24 AUG		12 SEPT		4 OCT			
	SPECIES	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
1	AGSM	0.0	0.0	4.9	0.0	4.9	9.7	5.2	10.5	5.5	11.4	6.0	13.0	6.1	14.8	6.7	16.9	0.0	18.0	6.9	0.0	8.0	0.0	0.0	0.0
2	ALTE	3.7	0.0	5.5	9.8	5.6	10.8	5.7	12.0	0.0	0.0	6.5	14.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	ARCO	0.0	0.0	4.2	10.0	4.8	11.2	0.0	0.0	6.2	14.0	6.5	16.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	ARHO	3.6	0.0	4.2	9.2	5.0	10.0	5.3	11.5	5.6	14.2	5.8	15.9	6.0	18.0	6.8	0.0	6.9	0.0	7.0	0.0	7.5	0.0	0.0	0.0
5	ARHO2	3.5	9.1	5.5	12.0	5.0	0.0	5.5	14.0	6.0	14.5	6.3	16.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	ARTR	3.2	0.0	3.3	9.2	3.3	9.2	3.4	9.2	3.5	9.2	4.0	9.5	4.3	9.5	4.5	9.7	5.0	9.9	5.0	11.5	0.0	0.0	0.0	0.0
7	ASDI	4.4	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ASPU	4.1	10.3	4.5	13.0	3.0	14.0	5.4	16.0	5.6	16.5	6.0	16.9	6.5	18.0	6.9	0.0	6.9	0.0	7.0	0.0	0.0	0.0	0.0	0.0
9	ASSP	3.7	9.3	4.9	11.1	5.5	13.5	5.7	16.0	5.8	16.5	6.0	16.8	6.2	18.0	6.8	0.0	6.9	0.0	6.9	0.0	0.0	0.0	0.0	0.0
10	ATCO	3.3	0.0	4.2	0.0	5.0	10.2	5.3	11.0	5.4	12.8	5.7	14.0	5.6	15.5	6.0	16.0	6.1	16.5	6.3	16.7	6.3	0.0	0.0	0.0
11	CAEL	4.1	0.0	0.0	0.0	5.5	12.5	6.6	13.0	5.8	14.0	6.0	15.0	6.2	18.0	6.5	0.0	6.7	0.0	6.9	0.0	6.9	0.0	0.0	0.0
12	CAFI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	16.5	6.4	16.9	6.6	18.0	0.0	0.0	0.0	0.0	0.0	0.0
13	CELA	3.4	0.0	4.5	9.0	5.0	10.0	5.3	10.5	5.6	11.1	5.8	12.0	6.0	12.5	6.1	12.9	6.2	14.5	6.3	15.1	6.3	15.1	0.0	0.0
14	CHDO	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	CHVI	3.6	0.0	4.4	0.0	5.0	9.0	5.2	9.5	5.3	9.8	5.5	10.0	5.8	12.0	5.9	12.5	6.0	13.5	6.2	0.0	6.9	16.0	0.0	0.0
16	CYMO	0.0	0.0	5.2	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	DEPI	0.0	0.0	5.0	9.9	0.0	0.0	5.5	12.5	5.8	14.0	6.0	15.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	ERCE	1.0	0.0	3.4	0.0	3.9	0.0	4.5	0.0	5.3	0.0	5.3	0.0	5.4	12.5	5.7	13.0	5.9	15.0	0.0	0.0	0.0	0.0	0.0	0.0
19	EROV	3.5	0.0	4.2	9.0	5.0	10.5	4.5	11.4	5.0	12.5	5.7	15.2	6.1	18.0	6.5	0.0	6.6	0.0	6.7	0.0	6.7	0.0	0.0	0.0
20	GRSP	3.5	0.0	4.5	0.0	5.0	9.0	5.3	9.5	5.4	10.0	0.0	0.0	5.8	13.0	6.0	13.5	6.3	15.0	6.8	18.0	6.9	0.0	0.0	0.0
21	HAAC	3.6	0.0	4.1	0.0	5.0	9.5	5.4	0.0	5.6	0.0	5.8	0.0	5.9	0.0	6.0	0.0	6.3	0.0	6.8	0.0	8.0	18.0	0.0	0.0
22	KOCR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0	5.6	0.0	5.9	15.0	6.0	15.5	6.3	16.5	6.6	16.9	0.0	0.0	0.0	0.0
23	LARE	0.0	0.0	4.0	10.2	4.5	11.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	LEPU	3.6	0.0	4.5	0.0	5.0	9.0	5.3	11.0	5.5	14.0	5.9	15.9	0.0	0.0	6.3	16.3	6.5	16.8	6.8	0.0	0.0	0.0	0.0	0.0
25	LOOR	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	MACA	0.0	0.0	3.8	0.0	5.0	9.0	5.3	11.8	5.5	13.0	5.7	13.2	5.9	13.5	6.0	14.0	6.3	15.0	6.4	15.2	6.9	16.3	0.0	0.0
27	ORFA	0.0	0.0	0.0	0.0	4.0	0.0	4.3	9.0	4.5	9.5	4.7	9.8	5.1	10.0	5.4	12.0	5.6	13.0	5.8	14.3	0.0	0.0	0.0	0.0
28	OPPO	1.0	0.0	2.0	9.0	3.1	9.5	4.0	9.6	4.5	11.0	4.7	14.7	5.0	15.4	5.2	15.6	5.6	15.8	5.9	16.5	6.0	16.9	0.0	0.0
29	ORHY	3.5	0.0	4.1	0.0	5.3	9.5	5.4	10.7	5.8	13.0	6.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	PECL	6.2	16.6	6.5	16.8	6.6	18.0	6.7	0.0	6.9	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	PHHO	3.7	11.4	4.5	12.0	5.5	13.5	5.7	15.0	5.9	15.5	6.1	16.5	6.3	18.0	6.7	0.0	6.9	0.0	7.0	0.0	8.0	18.0	0.0	0.0
32	POCA	0.0	0.0	0.0	0.0	5.5	10.0	5.6	10.5	5.7	11.0	5.9	12.0	6.1	15.0	6.3	15.8	6.4	16.0	6.9	16.8	8.0	16.9	0.0	0.0
33	POSE	4.9	0.0	5.1	9.5	5.5	9.9	5.8	10.8	6.0	14.0	6.4	15.8	6.6	16.7	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	SIAL	0.0	0.0	0.0	0.0	4.5	9.5	5.2	11.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	8.0	0.0	0.0
35	SIHY	4.5	0.0	4.6	0.0	5.0	9.0	5.3	10.4	5.5	13.0	6.0	15.5	6.2	16.0	6.3	16.3	6.6	16.6	6.9	16.9	6.9	16.9	0.0	0.0
36	SILI	4.6	9.2	5.0	10.0	5.5	11.0	5.6	12.0	0.0	0.0	0.0	0.0	6.1	18.0	6.7	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	SPCO	3.4	0.0	4.4	0.0	5.3	10.0	5.4	11.5	5.7	15.0	6.0	15.8	6.2	16.8	6.4	16.9	6.6	18.0	6.8	0.0	6.9	0.0	0.0	0.0
38	STCO	0.0	0.0	4.5	0.0	5.0	9.4	5.3	10.5	5.8	11.5	6.0	14.0	6.3	16.5	6.7	16.8	6.7	18.0	6.8	0.0	6.9	0.0	0.0	0.0
39	TESP	3.3	0.0	4.4	0.0	5.1	9.0	5.4	9.5	5.6	10.5	5.8	12.1	6.0	0.0	6.3	0.0	6.4	0.0	6.9	0.0	8.0	18.0	0.0	0.0

PHENOLOGICAL INVENTORY   STUDY AREA HORSECREEK   1981   TYPE SITE ARTR-AGSM-ARNO-AGSP

	SPECIES	2 MAY		19 MAY		3 JUNE		15 JUNE		29 JUNE		14 JULY		28 JULY		11 AUG		25 AUG		12 SEPT		25 SEPT			
		VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VER	REPR
1	AGGL	0.0	0.0	5.5	12.0	5.7	14.0	6.4	14.5	6.8	16.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	AGSM	0.0	0.0	5.3	10.2	5.5	10.3	5.6	10.5	6.1	11.0	6.2	13.0	6.5	15.4	6.5	16.6	6.5	16.6	7.0	18.0	7.4	0.0	7.4	0.0
3	AGSP	0.0	0.0	5.3	10.1	5.5	10.1	5.7	10.5	5.9	14.5	6.1	16.1	6.2	16.3	6.4	16.5	6.5	16.9	6.9	18.0	8.0	0.0	0.0	0.0
4	ALTE	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	ANDI	4.0	9.0	0.0	0.0	5.0	12.0	5.2	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	ARFE	0.0	0.0	5.6	10.0	5.7	10.8	5.9	11.5	6.0	12.5	6.0	13.0	6.2	13.8	6.2	15.0	6.4	15.9	6.5	16.0	6.7	16.4	0.0	0.0
7	ARHO2	0.0	0.0	3.9	0.0	4.5	0.0	0.0	0.0	5.8	16.0	6.1	18.0	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANRO	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	ARNO	0.0	0.0	3.1	9.2	3.3	9.4	3.6	9.5	4.2	9.6	4.2	9.6	0.0	0.0	4.3	9.6	4.5	9.8	5.2	11.0	5.4	13.5	0.0	0.0
10	ARTR	0.0	0.0	3.3	9.2	3.5	9.5	4.2	9.5	4.4	9.6	4.4	9.6	4.4	9.6	4.4	9.7	4.5	9.8	5.0	10.7	5.3	12.5	0.0	0.0
11	ASPU	0.0	0.0	4.5	11.1	0.0	0.0	5.5	14.5	6.0	15.8	0.0	0.0	6.8	16.3	0.0	0.0	8.0	16.9	0.0	18.0	0.0	0.0	0.0	0.0
12	ASCA	0.0	0.0	5.5	12.5	5.7	13.0	5.7	13.0	5.8	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	BAIN	0.0	0.0	5.5	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	BRJA	0.0	0.0	0.0	0.0	0.0	0.0	5.2	10.5	5.4	12.5	6.5	16.5	8.0	16.7	0.0	16.9	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
15	BRTE	0.0	0.0	5.2	10.5	5.4	10.9	5.8	12.1	6.3	14.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	CAAN	0.0	0.0	5.3	11.6	5.5	12.0	5.7	13.0	6.3	14.0	6.8	15.5	6.9	15.9	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	CELA	0.0	0.0	4.6	0.0	5.2	10.1	6.5	11.0	5.7	11.5	5.9	11.7	6.0	12.0	6.0	12.5	6.1	12.9	6.3	13.5	6.5	14.5	0.0	0.0
18	CHDF	0.0	0.0	0.0	0.0	4.3	0.0	5.0	9.2	5.2	9.7	5.8	12.5	5.9	13.0	6.0	13.1	6.1	13.2	6.3	14.3	6.8	16.0	0.0	0.0
19	CHVI	4.1	0.0	5.0	0.0	5.2	9.2	5.3	9.5	5.5	9.6	5.8	9.7	5.9	10.0	0.0	0.0	5.9	11.0	6.0	11.0	6.6	13.0	0.0	0.0
20	CIUN	0.0	0.0	4.5	9.5	5.5	9.8	5.8	11.5	5.9	11.7	6.0	14.9	6.5	15.0	6.3	16.2	6.5	16.4	6.9	18.0	8.0	0.0	0.0	0.0
21	COPA	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	6.6	0.0	0.0	0.0	0.0	0.0
22	CRBR	6.8	15.0	6.9	16.3	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	CRY	4.5	10.5	5.5	11.5	5.5	11.8	5.8	13.0	5.5	12.5	6.8	16.0	8.0	16.4	0.0	16.7	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
24	CROC	4.0	9.1	4.5	10.1	5.0	10.6	5.5	12.0	6.5	16.1	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	CYMO	0.0	0.0	0.0	0.0	6.1	16.9	6.5	18.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	DEPI	4.1	9.1	5.1	13.1	5.5	13.8	5.7	14.0	5.9	14.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	ERPU	4.0	9.2	4.5	10.0	5.0	11.3	5.3	12.0	5.7	12.5	6.0	14.7	6.5	15.5	6.7	18.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	GACO	0.0	0.0	0.0	0.0	5.5	9.9	5.7	11.2	5.8	11.5	6.0	13.5	6.1	15.0	6.3	18.0	6.4	0.0	6.7	0.0	6.9	0.0	0.0	0.0
29	HAAC	0.0	0.0	5.5	12.5	5.6	14.0	5.7	18.0	5.9	0.0	6.1	0.0	6.4	0.0	6.5	0.0	6.6	0.0	6.7	0.0	8.0	0.0	0.0	0.0
30	KOCR	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	LARE	0.0	0.0	4.5	9.1	5.2	12.0	5.4	12.5	5.7	12.9	5.9	14.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	LEDE	0.0	0.0	0.0	0.0	5.5	13.5	5.7	14.5	6.3	14.8	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	LIIN	4.5	9.1	5.0	11.3	5.2	11.7	5.5	14.0	5.7	14.5	5.9	14.9	6.0	15.3	6.1	15.8	6.2	16.0	6.6	16.8	8.0	18.0	0.0	0.0
34	LOOR	4.0	0.0	6.5	11.3	6.7	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35	MACA	0.0	0.0	0.0	0.0	4.5	10.3	5.3	11.5	5.4	12.3	6.5	16.2	6.8	16.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	MAGR	3.5	0.0	3.7	0.0	4.5	9.7	5.5	10.2	5.7	10.7	5.9	14.5	6.1	15.1	6.2	15.9	6.3	16.1	6.4	16.8	6.9	18.0	0.0	0.0
37	OPPO	4.1	9.4	4.3	9.8	5.1	9.9	5.2	11.5	5.5	11.7	5.7	13.0	5.8	14.0	5.9	15.3	6.0	15.8	6.1	16.0	6.3	16.5	0.0	0.0
38	ORHY	4.3	9.1	4.7	9.5	5.0	9.9	5.3	14.0	6.0	15.5	6.2	16.5	6.5	16.9	6.7	16.9	6.7	18.0	0.0	0.0	0.0	0.0	0.0	0.0
39	PECL	3.5	0.0	4.2	9.5	5.3	11.2	5.5	12.0	5.8	14.5	5.9	18.0	6.0	0.0	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	PHHO	4.7	12.5	5.6	13.0	5.3	14.0	5.7	15.0	6.0	18.0	6.4	0.0	6.8	0.0	6.9	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	POSE	5.0	11.2	5.8	11.6	5.2	11.9	5.4	12.5	6.4	14.5	6.7	16.5	6.8	16.9	6.9	16.9	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
42	RHTR	3.3	0.0	4.8	0.0	5.2	0.0	5.5	0.0	5.7	0.0	5.8	0.0	5.9	0.0	5.9	0.0	6.0	0.0	6.1	0.0	6.4	0.0	0.0	0.0
43	SAIB	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	9.0	5.6	10.6	5.9	11.2	6.0	11.9	6.0	12.0	6.1	13.0	6.8	15.0	0.0	0.0
44	SIAL	0.0	0.0	0.0	0.0	5.5	11.8	6.1	12.9	6.3	13.5	8.0	16.8	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	SIHY	4.8	0.0	5.4	11.0	5.5	11.5	5.7	11.8	5.9	12.0	6.2	15.0	6.4	16.0	6.6	16.5	6.7	16.7	6.8	18.0	6.9	0.0	0.0	0.0
46	SPCO	3.7	0.0	4.6	0.0	5.0	9.5	5.2	10.5	5.5	11.0	6.0	0.0	6.2	0.0	6.3	0.0	6.4	0.0	6.5	0.0	6.8	0.0	0.0	0.0
47	STCO	4.7	9.2	0.0	0.0	5.2	10.1	5.5	13.0	5.7	13.5	6.2	16.0	6.4	16.5	6.5	16.8	6.6	16.9	6.7	18.0	6.9	0.0	0.0	0.0
48	TAOF	3.8	0.0	0.0	0.0	5.5	16.9	0.0	18.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	TOIN	0.0	0.0	5.4	11.5	5.6	13.0	5.7	13.3	5.8	13.6	6.0	14.5	6.6	16.3	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	TROU	4.2	0.0	4.8	10.4	5.1	10.0	5.3	10.8	5.7	11.5	6.0	15.0	6.5	15.8	6.6	16.5	6.8	18.0	8.0	0.0	0.0	0.0	0.0	0.0
51	VINU	4.7	11.0	5.3	13.0	5.4	16.0	5.7	18.0	6.1	18.0	6.3	0.0	6.6	0.0	6.9	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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52  XASA     3.5  0.0   4.5  0.0   4.8  9.0   5.2  9.2   5.4  9.4   5.6  9.5   5.7 10.0   5.9 10.5   5.9 10.6   6.0 11.2   0.0  0.0   0.0  0.0
53  YUGL     2.5  0.0   3.0  0.0   4.5  0.0   5.0  0.0   6.0  0.0   6.1  0.0   6.3  0.0   6.4  0.0   6.5  0.0   6.6  0.0   6.7  0.0   0.0  0.0
54  ZIVI     4.2 12.0   5.7 13.8   6.2 14.5   8.0 18.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
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PHENOLOGICAL INVENTORY   STUDY AREA MESA ANTEL   1981   TYPE SITE ARTR-AGSM

	SPECIES	2 MAY		26 MAY		5 JUNE		16 JUNE		30 JUNE		14 JULY		28 JULY		11 AUG		24 AUG		12 SEPT		4 OCT			
		VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VER	REPR
1	AGSM	3.5	0.0	4.5	0.0	4.7	0.0	4.8	0.0	5.6	0.0	6.0	15.5	6.2	16.5	6.5	16.5	6.7	16.9	6.9	16.9	8.0	18.0	0.0	0.0
2	ANDI	4.4	10.3	4.8	11.0	5.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.0	7.0	0.0	0.0	0.0
3	ARHO2	4.0	9.4	4.9	10.7	5.5	11.5	5.7	12.0	6.2	15.0	6.5	16.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	ARTR	3.1	0.0	3.2	9.0	3.3	9.2	3.4	9.3	3.4	9.4	4.2	9.6	4.3	9.7	4.8	9.7	4.8	10.0	5.0	11.5	5.3	12.2	0.0	0.0
5	ASDI	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	ASSP	3.9	9.4	4.3	10.0	5.0	11.0	5.4	11.5	5.6	14.5	5.8	15.5	6.2	18.0	6.5	0.0	6.6	0.0	6.7	0.0	8.0	0.0	0.0	0.0
7	ATGA	3.0	0.0	3.5	0.0	4.5	0.0	4.6	0.0	5.0	0.0	5.2	0.0	6.5	0.0	6.7	0.0	6.7	0.0	6.9	0.0	6.9	0.0	0.0	0.0
8	CAEL	4.2	9.9	5.1	10.5	5.7	12.0	5.9	12.5	6.0	14.0	6.1	15.1	6.1	15.8	6.2	16.0	6.4	16.7	6.5	16.9	6.7	16.9	0.0	0.0
9	CELA	3.5	4.0	4.2	9.0	4.4	9.1	4.6	9.2	4.9	10.2	5.2	10.3	5.5	10.3	5.7	10.5	5.9	12.5	6.1	15.3	6.8	16.0	0.0	0.0
10	CHVI	4.3	0.0	4.8	0.0	5.1	0.0	5.3	0.0	5.4	9.3	5.5	10.0	6.2	10.5	6.3	10.9	6.5	13.0	6.7	16.5	6.9	16.9	0.0	0.0
11	COPA2	0.0	0.0	0.0	0.0	5.2	11.0	5.5	13.5	6.2	15.0	6.8	16.9	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	ERCA	0.0	0.0	4.5	10.5	5.0	11.0	5.4	11.8	5.5	14.0	6.2	16.0	6.2	16.2	6.4	16.5	6.6	16.8	6.8	16.9	6.9	18.0	0.0	0.0
13	EROV	4.3	0.0	4.8	9.9	5.0	11.5	5.0	11.5	5.8	15.0	6.1	16.0	6.1	16.5	6.3	16.8	6.4	18.0	6.8	0.0	6.9	0.0	0.0	0.0
14	ERPU	0.0	0.0	4.8	11.1	5.0	11.7	5.3	12.8	5.5	15.0	6.8	16.1	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	ERCE	3.8	0.0	3.9	0.0	5.2	0.0	5.3	0.0	6.5	12.0	6.6	16.4	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	HAAC	3.6	0.0	4.3	10.9	4.8	11.5	5.0	11.7	5.6	15.0	6.0	16.9	6.3	18.0	6.5	0.0	6.6	0.0	6.8	0.0	6.9	0.0	0.0	0.0
17	LEPU	3.3	0.0	4.0	0.0	5.0	10.0	5.8	10.3	5.9	10.5	6.0	16.0	6.3	16.4	6.5	16.9	6.9	16.9	7.0	18.0	0.0	0.0	0.0	0.0
18	LOOR	4.5	9.1	4.9	10.0	5.5	13.0	5.8	14.5	5.9	16.0	6.4	16.9	6.8	18.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	MACA	4.1	0.0	4.6	0.0	5.0	0.0	5.3	9.0	5.9	10.0	6.0	11.5	6.2	12.5	6.4	15.5	6.8	16.7	8.0	18.0	0.0	0.0	0.0	0.0
20	OPPO	1.0	0.0	2.0	0.0	3.5	9.1	4.5	9.6	4.5	9.7	4.6	15.0	4.7	15.4	5.5	15.7	5.8	16.5	6.1	16.9	0.0	0.0	0.0	0.0
21	ORHY	4.2	0.0	4.9	0.0	5.2	0.0	5.5	10.0	5.8	12.5	6.1	15.5	6.4	16.4	6.6	16.8	6.8	16.9	8.0	18.0	0.0	0.0	0.0	0.0
22	PELA	4.2	0.0	4.7	0.0	5.1	9.0	5.4	12.0	5.6	14.5	0.0	0.0	0.0	0.0	0.0	0.0	6.5	18.0	0.0	0.0	0.0	0.0	0.0	0.0
23	PHHO	4.5	11.5	4.9	12.0	5.2	15.0	5.5	13.8	5.6	15.0	6.2	16.3	6.3	16.8	6.7	18.0	6.9	0.0	8.0	0.0	0.0	0.0	0.0	0.0
24	POFE	4.7	0.0	5.0	9.5	5.2	9.8	5.4	10.5	5.8	14.0	6.0	16.0	6.2	16.3	6.6	16.6	6.9	16.9	8.0	18.0	0.0	0.0	0.0	0.0
25	POSE	4.4	9.4	4.9	9.8	5.0	9.9	5.4	10.4	6.1	14.0	6.7	16.6	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	SIHY	4.6	0.0	5.0	0.0	5.1	9.0	5.5	10.3	5.6	13.0	6.1	16.1	6.4	16.4	6.7	16.5	6.9	16.7	8.0	18.0	0.0	0.0	0.0	0.0
27	SILI	4.1	0.0	4.9	0.0	5.2	11.2	5.5	11.4	5.7	14.0	6.0	16.0	6.2	16.3	6.5	16.8	6.9	16.9	8.0	18.0	0.0	0.0	0.0	0.0
28	SPCO	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	STCO	4.6	0.0	5.0	0.0	5.1	9.0	5.2	9.5	6.0	11.0	6.1	16.0	6.3	16.4	6.5	16.9	6.9	18.0	6.9	0.0	0.0	0.0	0.0	0.0
30	TRGY	4.2	9.1	4.8	9.8	4.9	9.8	5.0	13.0	5.5	16.0	6.0	16.9	6.5	18.0	6.6	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PHENOLOGICAL INVENTORY   STUDY AREA OWL DRAW   1981   TYPE SITE ARTR-AGSM-ARNO-AGSP

	SPECIES	15 APR		1 MAY		25 MAY		8 JUNE		15 JUNE		28 JUNE		13 JULY		27 JULY		10 AUG		24 AUG		11 SEPT		25 SEP	
		VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
1	ANRO	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	ACLA	3.2	0.0	3.8	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	AGGL	3.3	0.0	4.5	9.3	5.0	10.2	5.8	10.9	6.0	12.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	AGSM	3.5	0.0	4.4	0.0	5.2	0.0	5.3	0.0	5.5	0.0	5.9	16.5	6.1	16.9	6.1	16.9	6.2	16.9	6.4	16.9	6.9	18.0	8.0	0.0
5	AGSP	3.1	0.0	4.6	0.0	5.1	0.0	5.3	0.0	5.6	9.0	5.9	10.0	6.1	15.5	6.3	15.8	6.2	16.1	6.4	16.8	6.8	18.0	8.0	0.0
6	ALTE	3.3	0.0	4.7	9.3	5.0	9.9	5.5	11.0	6.1	12.3	6.5	13.5	6.9	16.5	6.9	16.9	6.9	16.9	8.0	18.0	0.0	0.0	0.0	0.0
7	ALCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	6.3	11.8	0.0	0.0	6.5	15.0	0.0	0.0	6.9	16.3	8.0	16.9
8	ANDI	0.0	0.0	3.3	0.0	4.5	9.8	0.0	0.0	5.5	15.0	6.8	18.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	ARHO	0.0	0.0	3.4	0.0	4.5	9.8	5.5	11.1	5.9	12.0	6.2	12.5	6.6	15.0	6.7	16.0	6.8	18.0	8.0	0.0	0.0	0.0	0.0	0.0
10	ARHO2	0.0	0.0	0.0	0.0	5.0	10.9	0.0	0.0	0.0	0.0	5.4	18.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	ARNO	2.0	0.0	2.9	0.0	3.0	9.1	3.3	9.3	3.6	9.4	3.9	9.6	4.1	9.5	4.5	9.5	4.3	9.6	4.5	9.7	4.8	13.0	5.1	13.5
12	ARTR	2.1	0.0	3.2	9.0	3.3	9.1	3.4	9.3	3.4	9.5	3.8	9.7	4.1	9.5	4.2	9.5	4.2	9.6	4.4	9.7	4.7	10.9	4.9	12.5
13	ASDP	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	4.8	10.0	5.2	10.5	5.3	10.7	5.6	11.1	0.0	0.0	6.2	12.9	6.8	15.0	8.0	16.5
14	ASMI	0.0	0.0	3.3	9.0	4.8	11.0	5.2	11.5	5.9	13.0	6.2	13.5	6.4	14.6	6.5	15.0	6.6	18.0	6.9	0.0	8.0	0.0	0.0	0.0
15	ASMI2	0.0	0.0	3.3	9.0	5.0	10.5	5.5	12.0	5.7	14.0	6.0	14.4	6.8	18.0	0.0	0.0	6.9	0.0	8.0	0.0	0.0	0.0	0.0	0.0
16	ASPU	3.1	0.0	4.3	11.0	4.8	14.0	0.0	0.0	5.5	14.3	6.5	14.8	6.6	15.0	6.7	15.4	6.8	16.5	8.0	16.9	8.0	18.0	0.0	0.0
17	ASSP	0.0	0.0	3.3	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	18.0	0.0	0.0	6.5	0.0	6.8	0.0	8.0	0.0	0.0	0.0
18	BASA	3.2	0.0	3.6	10.5	4.5	11.5	4.9	12.0	5.7	12.5	5.9	16.5	6.5	16.6	6.9	16.9	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
19	CACH	0.0	0.0	4.8	9.6	5.2	11.0	5.5	11.2	5.8	12.1	5.9	14.0	6.0	14.5	6.2	15.2	6.6	16.5	6.8	16.9	8.0	18.0	0.0	0.0
20	CAMI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	11.9	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	CANU	0.0	0.0	3.7	9.0	4.5	10.5	5.0	10.5	5.0	9.8	6.0	11.5	6.5	13.0	6.7	14.0	6.9	16.0	6.9	16.2	8.0	16.9	0.0	18.0
22	CELA	0.0	0.0	4.1	0.0	0.0	0.0	5.0	0.0	5.5	0.0	5.7	9.0	5.9	9.4	5.9	9.6	6.0	10.5	6.8	18.0	8.0	0.0	0.0	0.0
23	CHDO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	4.9	11.0	5.2	11.8	5.8	14.0	6.0	15.0	6.7	16.3	6.9	18.0
24	CHTE	0.0	0.0	4.5	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	18.0
25	CHVI	0.0	0.0	4.2	0.0	5.0	0.0	5.2	0.0	5.3	9.5	5.4	9.6	5.8	10.0	5.9	11.0	6.0	11.5	6.0	11.9	6.2	12.0	6.5	13.0
26	CIUN	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	11.8	5.7	12.1	6.2	16.1	6.3	16.8	0.0	0.0	6.7	18.0	8.0	0.0	0.0	0.0
27	COLI	0.0	0.0	3.5	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	10.5	0.0	0.0	0.0	0.0	0.0	0.0
28	COPA	0.0	0.0	0.0	0.0	4.5	11.5	5.2	12.0	0.0	0.0	0.0	0.0	5.5	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	BEWY	0.0	0.0	3.3	9.1	5.0	10.5	5.5	12.5	5.8	14.5	6.5	18.0	6.9	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	CRMO	3.1	0.0	4.1	9.0	4.5	9.5	5.0	10.9	6.0	12.2	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	CRBR	0.0	0.0	3.3	9.0	4.5	10.5	6.0	11.5	6.2	12.5	6.5	14.0	6.7	14.8	0.0	0.0	8.0	16.0	0.0	16.8	0.0	0.0	0.0	16.9
32	CYMO	0.0	0.0	4.7	11.0	5.5	13.0	5.9	14.0	5.8	16.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.9
33	DEPI	0.0	0.0	0.0	0.0	5.0	11.0	0.0	0.0	0.0	0.0	6.2	15.5	6.8	15.8	0.0	0.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
34	DOCO	0.0	0.0	3.8	11.3	5.3	12.5	0.0	0.0	6.2	16.9	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35	ERAS	0.0	0.0	4.5	9.5	0.0	0.0	5.9	12.9	0.0	0.0	6.5	14.0	6.6	15.5	6.8	16.0	6.8	16.5	8.0	16.7	0.0	18.0	0.0	0.0
36	EROC	3.0	0.0	3.6	10.0	4.5	10.8	5.0	11.5	5.9	11.8	6.5	14.0	6.7	16.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	EROV	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	ERPU	0.0	0.0	0.0	0.0	0.0	0.0	5.8	11.0	6.0	14.0	6.5	18.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	FRAT	0.0	0.0	0.0	0.0	5.2	12.0	6.0	14.0	6.2	15.0	0.0	0.0	6.3	15.2	6.5	15.1	6.6	16.3	8.0	16.5	0.0	16.9	0.0	18.0
40	HAAC	3.0	0.0	4.3	9.7	5.0	10.6	5.5	10.8	5.9	12.0	6.2	16.0	6.4	18.0	0.0	0.0	6.5	0.0	6.6	0.0	6.8	0.0	0.0	0.0
41	JUOS	1.0	0.0	3.1	0.0	3.5	0.0	0.0	0.0	4.5	0.0	5.0	13.0	5.3	14.0	5.4	14.3	5.8	14.7	5.8	15.0	6.4	16.0	6.6	16.5
42	KOCR	3.0	0.0	4.2	0.0	0.0	0.0	5.0	10.0	5.0	9.9	5.8	11.5	5.9	16.5	6.1	16.9	6.3	18.0	6.4	0.0	6.9	0.0	8.0	0.0
43	LARE	0.0	0.0	0.0	0.0	0.0	0.0	5.0	12.0	0.0	0.0	0.0	0.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	LEFE	3.4	0.0	4.6	0.0	0.0	0.0	6.0	10.0	6.5	11.5	6.7	13.0	6.8	13.4	8.0	14.2	8.0	14.2	0.0	15.8	0.0	16.0	0.0	18.0
45	LELU	0.0	0.0	0.0	0.0	5.0	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0
46	LILE	1.0	0.0	4.2	0.0	5.0	10.0	5.5	12.0	5.5	11.2	6.0	13.0	6.3	14.6	6.4	15.1	6.5	16.0	6.6	6.2	6.9	16.8	8.0	18.0
47	LOOR	4.0	11.0	4.3	11.7	5.5	14.0	0.0	0.0	0.0	0.0	5.0	15.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	14.0
48	MAGR	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	13.2	6.2	14.0	6.3	14.5	6.4	14.7	6.6	15.0	6.8	16.0
49	MELO	3.3	0.0	4.6	11.2	4.9	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	16.0
50	MAVI	0.0	0.0	1.0	0.0	2.0	11.0	4.5	13.0	5.0	13.5	5.5	14.5	5.6	14.5	6.0	14.9	6.1	15.2	6.2	15.0	0.0	0.0	0.0	0.0
51	OPPO	1.0	0.0	1.0	0.0	0.0	0.0	2.5	9.5	5.0	9.7	5.5	11.0	5.6	13.0	5.9	14.0	5.9	15.5	5.9	15.8	6.1	16.0	6.2	16.5

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52  ORHY     2.1  0.0   2.9  0.0   5.1  0.0   0.0  0.0   0.0  0.0   5.8 11.0   6.2 15.0   6.4 15.6   6.4 16.5   6.5 16.7   6.9 16.9   6.9 18.0
53  OXLA     0.0  0.0   4.5 10.7   5.0 11.8   0.0  0.0   0.0  0.0   6.1 15.0   6.3 15.5   6.5 15.8   6.6 16.3   6.8 16.5   6.9 16.8   8.0 18.0
54  PECL     3.2  0.0   4.2  0.0   0.0  0.0   5.5 11.5   5.3 12.0   5.5 13.0   6.0 14.8   6.1 15.0   6.5 16.6   6.6 16.9   6.9 18.0   8.0  0.0
55  PELA     0.0  0.0   3.6  9.0   0.0  0.0   5.5 11.5   5.3 12.0   5.6 13.0   6.7 16.0   6.7 16.5   8.0 16.8   0.0 18.0   0.0  0.0   0.0  0.0
56  PHHO     3.9  0.0   4.8 12.3   0.0  0.0   5.8 16.0   6.0 16.5   8.0 18.0   8.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
57  PHMU     0.0  0.0   0.0  0.0   5.0 11.5   5.5 12.5   6.0 16.0   8.0 18.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
58  POFE     0.0  0.0   4.3  0.0   5.0  0.0   0.0  0.0   6.0 14.0   6.1 15.0   6.3 16.1   6.5 16.6   6.7 16.7   8.0 16.9   0.0 18.0   0.0  0.0
59  POSE     3.8  0.0   4.5  9.5   5.1 10.8   5.5 11.0   6.1 11.9   6.4 16.0   6.6 16.5   6.8 16.9   6.9 18.0   8.0  0.0   0.0  0.0   0.0  0.0
60  SEIN     0.0  0.0   0.0  0.0   5.0 11.0   5.2 11.5   5.8 11.5   6.0 13.0   6.5 16.5   6.9 16.8   8.0 18.0   0.0  0.0   0.0  0.0   0.0  0.0
61  SEST     0.0  0.0   4.6  0.0   5.1  9.8   5.4 10.0   5.5 10.5   5.7 12.0   6.3 14.8   6.4 15.0   6.6 16.0   6.7 16.3   8.0 16.8   0.0 18.0
62  SIAL     0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   5.5 14.0   6.0 15.5   8.0 18.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
63  SIHY     0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   5.5 11.2   5.8 12.5   6.0 14.0   6.2 15.0   0.0  0.0   6.4 16.0   6.9 16.8   8.0 16.9
64  SPCO     0.0  0.0   3.5  0.0   4.0  0.0   5.0  0.0   5.2  9.5   6.0 12.0   6.2 13.0   6.3 14.0   6.6 15.5   6.6 15.8   6.9 16.5   6.9 16.9
65  STCO     2.4  0.0   3.6  0.0   0.0  0.0   0.0  0.0   5.4 13.0   5.8 13.5   6.0 14.0   6.2 15.4   6.3 15.8   6.4 16.5   6.6 16.8   8.0 18.0
66  TADF     0.0  0.0   4.5 13.0   0.0  0.0   5.0  0.0   0.0  0.0   6.0 18.0   8.0 18.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
67  TRDU     0.0  0.0   4.0  0.0   4.0  0.0   0.0  0.0   4.5  0.0   5.8 10.0   6.5 18.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
68  TRGY     0.0  0.0   4.1 10.6   5.5 13.0   5.5 13.0   5.9 16.0   6.4 18.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
69  VIAM     0.0  0.0   4.0  0.0   4.5  0.0   5.0 11.2   5.9 12.0   6.6 13.5   6.8 18.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
70  VINU     3.2  0.0   3.8 10.0   5.2 12.5   6.0 14.0   5.5 13.0   6.5 15.0   6.6 16.0   6.8 16.5   6.9 16.8   8.0 18.0   0.0  0.0   0.0  0.0
71  XASA     0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   5.0  9.5   5.8  9.6   5.9  9.8   6.1 12.0   6.2 12.5   0.0  0.0   0.0  0.0   0.0  0.0
72  ZIVE     3.2  0.0   3.7  0.0   4.5 11.0   0.0  0.0   0.0  0.0   8.0 18.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
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PHENOLOGICAL INVENTORY   STUDY AREA RED WASH2   1981   TYPE SITE ARTR-AGSM-AGSP

	SPECIES	1 MAY		4 JUNE		15 JUNE		29 JUNE		13 JULY		27 JULY		10 AUG		25 AUG		13 SEPT		3 OCT					
		VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
1	AGSM	3.9	0.0	4.2	0.0	4.6	9.0	5.5	10.0	6.0	14.0	6.1	14.5	6.4	16.9	6.5	16.9	6.9	16.9	6.9	18.0	0.0	0.0	0.0	0.0
2	AGSP	4.6	0.0	5.4	10.0	5.4	10.2	5.6	10.6	6.0	15.2	6.1	15.5	6.5	16.9	6.5	16.5	6.7	16.7	6.9	18.0	0.0	0.0	0.0	0.0
3	ALTE	3.0	0.0	4.6	10.0	5.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	ARHO	3.8	0.0	5.2	9.8	5.4	12.0	5.5	13.2	6.0	14.0	6.2	18.0	6.3	0.0	6.3	0.0	6.3	0.0	6.6	0.0	0.0	0.0	0.0	0.0
5	ARHO2	4.2	11.9	5.5	12.5	5.5	13.5	6.0	14.6	0.0	0.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	ARTR	3.2	0.0	3.3	9.0	3.4	9.2	3.6	9.5	4.3	9.6	4.3	9.6	4.5	9.7	4.8	9.9	5.5	11.4	5.7	12.0	0.0	0.0	0.0	0.0
7	ASDI	0.0	0.0	5.5	11.5	5.5	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ASKE	3.0	0.0	4.8	9.0	5.0	13.0	0.0	0.0	0.0	0.0	8.0	16.0	0.0	16.5	6.2	16.9	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	ASPU	3.6	9.3	5.0	12.5	5.2	14.0	5.3	14.7	6.0	16.0	6.7	18.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	CAS	0.0	0.0	0.0	0.0	0.0	0.0	5.0	11.4	6.5	16.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	CELA	3.2	0.0	3.7	0.0	4.3	0.0	5.0	9.5	0.0	0.0	5.3	9.9	5.4	10.0	0.0	0.0	6.3	15.5	6.5	16.0	0.0	0.0	0.0	0.0
12	CHDO	3.8	0.0	4.0	9.0	4.8	11.4	5.3	13.5	6.0	14.0	6.2	14.5	6.3	15.0	6.4	16.0	6.4	16.1	6.5	0.0	0.0	0.0	0.0	0.0
13	CHNA	3.2	0.0	4.0	0.0	5.0	0.0	5.3	0.0	5.5	9.9	5.7	10.5	5.8	10.7	6.0	11.5	6.4	11.6	6.5	14.0	0.0	0.0	0.0	0.0
14	CHVI	3.8	0.0	4.0	0.0	4.8	0.0	5.0	0.0	5.4	10.0	5.8	11.2	5.9	11.6	6.2	13.5	6.4	14.0	6.7	14.5	0.0	0.0	0.0	0.0
15	CORA	0.0	0.0	0.0	0.0	4.2	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	CRFL	3.5	0.0	5.2	10.0	0.0	0.0	5.8	12.7	6.0	13.0	6.1	15.0	6.5	15.7	6.7	16.6	6.8	16.8	6.9	16.9	0.0	0.0	0.0	0.0
17	CYMO	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	ERAS	3.6	0.0	4.5	12.0	5.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	ERCE	3.6	0.0	3.7	0.0	4.2	0.0	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	ERBR	2.4	0.0	3.8	0.0	4.8	0.0	5.0	0.0	5.5	11.0	5.8	11.5	5.9	12.0	6.1	12.2	6.5	12.3	6.9	12.5	0.0	0.0	0.0	0.0
21	EROV	3.9	0.0	4.6	10.0	5.0	11.3	5.3	12.0	5.6	12.5	5.8	15.0	6.0	15.3	6.5	16.8	6.6	18.0	6.7	0.0	0.0	0.0	0.0	0.0
22	ERPU	0.0	0.0	5.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	GICO	0.0	0.0	5.2	11.3	5.5	11.7	6.0	13.2	6.3	14.5	6.6	15.2	6.9	15.5	8.0	16.9	7.3	7.5	0.0	0.0	0.0	0.0	0.0	0.0
24	GRSP	3.6	0.0	5.3	9.8	5.3	10.0	5.4	11.0	5.8	12.5	6.0	12.9	6.2	12.0	6.4	15.8	6.8	18.0	6.9	0.0	0.0	0.0	0.0	0.0
25	HAAC	3.3	0.0	4.5	0.0	5.0	0.0	5.6	0.0	0.0	0.0	6.0	18.0	6.3	0.0	6.4	0.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	KOCR	4.5	0.0	4.8	0.0	5.0	0.0	5.3	10.0	0.0	0.0	5.8	13.5	6.0	14.7	6.4	16.0	6.4	16.7	0.0	0.0	0.0	0.0	0.0	0.0
27	LARE	0.0	0.0	5.5	10.5	5.5	12.0	0.0	0.0	0.0	0.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	LEPU	3.6	0.0	4.5	10.2	5.2	13.0	6.0	15.0	6.5	16.0	6.6	16.5	6.7	18.0	6.8	0.0	6.8	0.0	6.8	0.0	0.0	0.0	0.0	0.0
29	MACA	3.8	0.0	3.9	0.0	5.0	13.5	5.3	14.2	5.5	14.3	5.7	14.5	5.8	14.8	6.0	15.0	6.2	12.9	0.0	0.0	0.0	0.0	0.0	0.0
30	MAGR	0.0	0.0	0.0	0.0	4.5	0.0	5.0	0.0	5.5	0.0	5.9	0.0	6.0	0.0	6.2	12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	OPPO	1.0	0.0	3.0	9.0	3.5	9.6	4.2	11.0	5.0	12.5	5.4	13.5	5.5	14.0	5.7	15.3	5.9	16.0	6.0	16.5	0.0	0.0	0.0	0.0
32	ORFA	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	ORHY	4.3	0.0	5.0	9.0	5.2	10.5	5.5	12.5	6.0	14.0	6.1	16.7	6.2	16.9	6.3	18.0	6.5	6.8	0.0	0.0	0.0	0.0	0.0	0.0
34	PECL	3.8	0.0	4.5	9.4	5.2	11.0	5.5	13.5	5.9	14.5	6.0	15.0	6.1	16.0	6.2	16.7	7.5	7.7	***	0.0	0.0	0.0	0.0	0.0
35	PHHO	3.3	11.5	5.8	14.0	5.8	16.0	6.2	16.3	6.5	16.9	6.7	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	POL	0.0	0.0	5.3	9.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	POSE	4.4	0.0	5.0	9.9	5.5	10.5	6.2	12.0	6.5	16.0	6.6	16.6	8.0	16.8	0.0	16.9	0.0	16.9	7.0	18.0	0.0	0.0	0.0	0.0
38	SILI	0.0	0.0	5.0	10.8	5.4	11.8	6.0	13.5	6.9	14.0	8.0	16.5	8.0	16.8	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	SIHY	4.5	0.0	0.0	0.0	5.2	9.8	5.4	10.0	0.0	0.0	6.0	15.7	6.1	16.0	6.4	16.6	6.8	16.8	6.9	16.9	0.0	0.0	0.0	0.0
40	STCO	4.2	0.0	5.0	9.8	5.2	10.6	5.8	11.5	6.1	15.5	6.2	16.5	6.7	16.8	6.8	16.9	6.9	16.9	7.0	18.0	0.0	0.0	0.0	0.0
41	TECA	3.1	0.0	4.0	0.0	4.4	0.0	5.0	0.0	5.5	9.9	5.8	10.2	5.9	10.3	6.0	12.0	7.0	13.0	7.3	15.0	0.0	0.0	0.0	0.0
42	TOIN	3.7	9.2	5.5	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	VINU	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PHENOLOGICAL INVENTORY   STUDY AREA SHOSHONI 7   1981   TYPE SITE ARTR-AGSM

	SPECIES	1 MAY		20 MAY		3 JUNE		18 JUNE		30 JUNE		13 JULY		27 JULY		10 AUG		24 AUG		11 SEPT		25 SEPT			
		VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VER	REPR
1	AGSM	3.9	0.0	4.6	0.0	5.2	0.0	5.8	0.0	6.0	12.0	6.3	15.0	6.4	16.9	6.4	0.0	6.6	0.0	7.0	18.0	7.7	0.0	0.0	0.0
2	ALTE	4.5	9.8	5.5	10.5	5.9	12.0	6.2	14.0	6.4	14.8	6.8	15.5	8.0	16.0	0.0	16.4	0.0	16.8	0.0	18.0	0.0	0.0	0.0	0.0
3	ARCO	0.0	0.0	0.0	0.0	5.9	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	ARHO2	4.8	11.5	5.4	12.0	6.0	13.5	6.1	14.0	6.2	14.5	6.4	16.0	6.9	16.5	8.0	16.8	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
5	ARTR	2.9	0.0	3.1	9.0	3.3	9.2	4.0	9.4	4.1	9.6	4.2	9.6	4.4	9.6	4.5	9.7	4.6	9.7	4.9	11.5	5.1	12.5	0.0	0.0
6	ASMI2	3.5	0.0	5.5	11.5	5.7	11.9	5.9	12.8	6.0	13.0	6.1	15.5	6.5	15.9	6.5	16.4	6.7	16.8	8.0	18.0	0.0	0.0	0.0	0.0
7	ASPU	4.5	11.3	5.5	12.5	6.0	13.0	6.3	14.5	6.4	15.5	6.5	18.0	6.7	0.0	6.9	0.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
8	BOGR	4.2	0.0	4.3	0.0	4.6	0.0	4.9	9.0	5.2	10.5	6.0	13.0	6.1	13.5	6.1	14.0	6.3	16.3	6.3	16.8	6.5	18.0	0.0	0.0
9	BRTE	4.5	9.0	5.4	13.0	5.8	13.5	6.5	15.0	6.7	15.5	6.9	16.0	8.0	16.5	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	CAFI	4.8	12.0	4.9	14.1	5.0	16.2	6.1	16.3	6.3	16.5	6.4	16.6	6.8	18.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	CELA	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	CHAL	0.0	0.0	0.0	0.0	0.0	0.0	6.0	13.5	6.2	13.0	6.3	13.1	6.4	13.3	6.5	15.0	6.7	15.5	8.0	16.0	0.0	16.8	0.0	0.0
13	CHVI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	0.0	5.5	9.0	5.6	9.3	5.9	9.5	5.9	9.8	6.0	10.1	6.7	13.0	0.0	0.0
14	CRFL	0.0	0.0	0.0	0.0	0.0	0.0	6.1	11.8	6.8	15.0	8.0	16.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	CYMO	4.1	12.0	5.5	13.0	5.9	15.0	0.0	0.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	DEPI	4.0	9.2	5.7	13.0	5.9	13.5	6.4	15.0	6.6	15.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	ERPU	4.4	9.0	5.1	10.0	5.7	11.0	6.9	11.9	6.1	12.8	6.2	15.0	6.3	16.0	6.3	16.4	6.5	16.7	8.0	18.0	0.0	0.0	0.0	0.0
18	LARE	4.3	9.0	4.6	11.0	5.5	13.0	6.2	14.5	8.0	16.5	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	LEDE	0.0	0.0	0.0	0.0	5.6	13.0	6.5	15.0	8.0	16.5	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	LUPU	3.4	0.0	3.7	9.0	5.5	11.0	5.6	11.5	5.8	13.0	6.0	14.5	6.2	15.0	6.7	16.5	8.0	16.7	0.0	18.0	0.0	0.0	0.0	0.0
21	MACA	0.0	0.0	0.0	0.0	5.5	0.0	5.8	12.5	6.0	13.0	6.1	15.0	6.2	15.5	6.3	16.3	6.4	16.5	6.7	16.6	8.0	18.0	0.0	0.0
22	OPPO	2.0	0.0	3.0	9.0	5.0	9.5	5.3	10.5	5.6	13.0	5.7	15.0	5.8	15.3	5.9	15.5	5.9	15.9	6.1	16.5	6.3	16.8	0.0	0.0
23	ORHY	4.7	0.0	5.0	0.0	5.6	0.0	5.7	14.5	5.8	14.8	6.1	15.5	6.2	16.1	6.3	16.3	6.5	16.8	6.6	18.0	6.8	0.0	0.0	0.0
24	PHHO	5.0	12.5	5.5	15.0	5.9	16.0	6.2	18.0	6.4	0.0	6.5	0.0	6.6	0.0	6.7	0.0	6.8	0.0	8.0	0.0	0.0	0.0	0.0	0.0
25	PLPA	0.0	0.0	0.0	0.0	5.1	12.5	5.3	13.5	5.8	14.0	6.2	15.0	6.7	16.0	8.0	16.8	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
26	POSE	4.1	10.1	5.7	11.5	6.0	12.3	6.3	14.0	6.5	15.0	6.8	16.1	6.9	16.5	6.9	16.8	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
27	SIHY	4.8	9.1	5.0	11.0	5.2	13.0	5.7	13.5	5.8	14.0	6.2	15.2	6.3	15.8	6.4	16.0	6.5	16.3	6.5	18.0	6.9	0.0	0.0	0.0
28	SILI	0.0	0.0	5.3	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	SPCO	3.3	0.0	4.5	0.0	5.9	9.5	6.0	10.0	6.1	11.0	6.2	14.0	6.3	14.9	6.3	15.0	6.4	15.9	6.4	16.8	6.7	18.0	0.0	0.0
30	STCO	4.8	0.0	5.1	0.0	5.6	13.0	5.7	13.5	5.8	14.0	6.0	16.4	6.3	16.7	6.4	16.9	6.5	18.0	6.6	0.0	6.9	0.0	0.0	0.0
31	VUOC	0.0	0.0	0.0	0.0	0.0	0.0	6.2	14.0	6.5	15.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PHENOLOGICAL INVENTORY STUDY AREA SWEETWATER 1981 TYPE SITE ARTR-ARNO-AGSM

	SPECIES	21 MAY		25 MAY		9 JUNE		17 JUNE		13 JULY		15 JULY		29 JULY		12 AUG		24 AUG		12 SEPT		4 OCT			
		VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEP	REPR
1	AGSM	4.6	0.0	4.8	9.6	5.5	9.0	5.5	0.0	0.0	0.0	6.2	14.5	6.3	15.0	6.3	16.5	6.6	16.9	6.6	16.9	7.2	18.0	0.0	0.0
2	ALTE	4.8	9.9	5.0	10.0	5.8	11.8	5.9	12.0	6.8	14.5	6.9	16.9	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	ARFR	3.5	0.0	4.8	9.5	5.0	9.7	5.2	9.8	5.3	10.0	5.4	10.1	5.6	10.3	5.7	10.5	5.8	11.0	6.0	12.6	6.1	11.5	0.0	0.0
4	ARHO2	0.0	0.0	0.0	0.0	5.5	13.0	5.7	13.7	6.2	14.0	6.1	16.1	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	ARHO	3.8	9.8	5.5	9.9	5.6	11.5	5.8	11.9	5.9	14.0	6.2	16.5	6.4	16.9	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	ARNO	3.0	0.0	3.1	9.0	3.5	9.4	3.4	9.4	0.0	0.0	4.3	9.5	4.3	9.5	4.4	9.7	4.4	9.7	4.9	11.5	5.0	12.0	0.0	0.0
7	ARTP	3.1	0.0	3.3	9.2	3.4	9.2	3.5	9.5	0.0	0.0	4.3	9.4	4.3	9.5	4.5	9.6	4.6	9.7	4.8	11.2	5.0	12.5	0.0	0.0
8	ASMI	0.0	0.0	4.8	9.0	5.2	11.6	0.0	0.0	6.4	15.5	6.6	16.5	6.7	16.9	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	ASMI2	0.0	0.0	0.0	0.0	5.2	11.2	5.4	11.3	6.1	12.8	6.3	14.0	6.4	16.0	6.8	16.4	6.8	16.9	7.2	18.0	7.5	0.0	0.0	0.0
10	ASPU	0.0	0.0	5.0	10.0	5.8	12.9	5.9	13.0	6.2	15.0	6.4	15.5	6.7	18.0	6.7	0.0	6.8	0.0	6.8	0.0	8.0	0.0	0.0	0.0
11	ASCI	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	ASSP	3.0	0.0	5.0	9.0	5.5	11.5	5.7	16.7	5.8	12.0	5.9	14.3	6.0	16.5	6.4	16.8	6.5	18.0	6.6	0.0	6.9	0.0	0.0	0.0
13	CAEL	4.8	9.0	5.0	11.0	5.6	12.0	6.0	13.0	6.3	18.0	6.5	0.0	6.6	0.0	6.8	0.0	6.8	0.0	6.9	0.0	6.9	0.0	0.0	0.0
14	CAFI	4.9	11.5	5.0	12.0	6.0	12.8	6.1	13.0	6.3	15.0	6.5	15.8	6.6	16.7	6.8	18.0	6.8	0.0	6.8	0.0	6.8	0.0	0.0	0.0
15	CELA	0.0	0.0	0.0	0.0	5.0	9.0	5.2	9.1	6.0	9.2	6.3	9.5	6.4	9.6	6.5	9.7	6.6	10.5	6.7	13.5	0.0	0.0	0.0	0.0
16	CHDO	0.0	0.0	4.5	9.2	4.8	10.0	5.0	10.2	5.3	11.8	5.7	12.9	5.9	15.0	6.0	15.5	6.1	16.5	6.3	18.0	6.5	0.0	0.0	0.0
17	CHE	0.0	0.0	0.0	0.0	5.0	9.2	5.7	11.5	6.1	13.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	CHVI	3.5	0.0	5.0	0.0	5.2	0.0	5.4	0.0	5.7	9.5	5.8	10.0	6.0	12.0	6.0	12.5	6.1	13.0	6.2	13.1	6.8	16.0	0.0	0.0
19	CHNA	3.5	0.0	4.5	0.0	5.2	0.0	5.3	0.0	5.4	0.0	5.5	0.0	5.6	9.2	5.7	9.6	5.9	10.0	6.2	13.1	0.0	0.0	0.0	0.0
20	CLSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	COPA	4.5	10.0	5.0	11.0	5.2	12.5	5.4	12.8	5.7	13.0	5.8	13.5	6.1	16.0	6.2	16.5	6.5	18.0	6.6	0.0	0.0	0.0	0.0	0.0
22	CRBR	4.5	9.8	4.7	10.5	5.5	11.7	5.7	11.9	0.0	0.0	0.0	0.0	6.0	18.0	0.0	0.0	0.0	0.0	7.2	0.0	0.0	0.0	0.0	0.0
23	CRFL	4.0	10.3	5.0	10.8	5.5	11.5	5.7	11.3	6.1	13.5	6.4	15.8	0.0	0.0	6.8	18.0	6.8	0.0	6.9	0.0	8.0	0.0	0.0	0.0
24	CYMO	5.0	13.0	5.2	13.2	5.5	16.0	5.6	16.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	DEGE	5.2	0.0	5.4	9.5	5.5	10.0	5.7	11.0	6.3	14.0	6.5	15.0	6.8	16.2	8.0	16.4	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
26	DEPI	5.2	10.0	5.3	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	ERCE	0.0	0.0	2.0	0.0	5.0	9.0	5.1	9.1	5.4	9.6	5.6	9.7	5.7	12.0	5.9	13.0	6.1	14.5	7.0	18.0	8.0	0.0	0.0	0.0
28	EROV	4.0	10.0	5.0	11.0	5.1	11.5	5.3	11.7	5.0	13.0	5.3	15.9	6.0	16.3	6.1	16.5	6.3	16.9	6.4	18.0	6.8	0.0	0.0	0.0
29	ERPU	0.0	0.0	0.0	0.0	5.0	11.5	5.2	11.7	6.0	13.8	6.1	15.0	6.2	16.0	6.4	16.5	6.6	16.8	7.0	18.0	0.0	0.0	0.0	0.0
30	EUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	GICO	0.0	0.0	5.0	12.0	0.0	0.0	5.4	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	HAAC	4.5	10.4	5.0	12.0	5.6	12.8	5.7	12.9	5.8	18.0	6.0	0.0	6.1	0.0	6.2	0.0	6.3	0.0	6.6	0.0	6.9	0.0	0.0	0.0
33	KOCR	4.3	9.2	4.8	10.1	5.0	9.9	5.2	10.5	5.9	14.0	6.0	16.0	6.3	16.2	6.3	16.6	6.5	16.8	6.6	16.9	7.1	18.0	0.0	0.0
34	LARE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35	LELU	4.8	11.8	5.0	12.0	5.5	12.5	5.6	12.8	5.8	14.0	6.0	15.0	6.1	16.0	6.3	16.3	6.7	16.8	7.0	18.0	0.0	0.0	0.0	0.0
36	LEPU	4.2	0.0	4.5	0.0	5.0	11.8	5.2	12.0	5.7	13.5	6.0	16.0	6.3	18.0	6.5	0.0	6.6	0.0	6.8	0.0	6.9	0.0	0.0	0.0
37	LIPU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	15.0	6.1	15.5	0.0	0.0	6.3	16.0	6.5	16.5	6.8	17.0	0.0	0.0	0.0	0.0
38	MACA	0.0	0.0	5.0	0.0	5.2	9.2	5.3	9.3	5.7	10.0	5.8	10.5	6.0	11.5	6.1	12.0	6.2	14.0	6.3	14.2	7.2	18.0	0.0	0.0
39	MAGR	0.0	0.0	0.0	0.0	5.0	9.2	5.2	10.0	5.8	11.4	5.9	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	OEAL	0.0	0.0	4.5	9.5	5.5	11.7	5.6	11.8	6.0	14.5	6.4	15.8	0.0	0.0	6.8	16.1	8.0	16.6	0.0	18.0	0.0	0.0	0.0	0.0
41	OECA	0.0	0.0	0.0	0.0	5.6	12.0	5.8	14.0	6.2	16.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	OPPO	3.0	0.0	3.5	9.0	4.5	9.1	4.6	10.0	5.5	12.0	5.6	14.0	5.8	15.0	5.9	15.3	6.0	15.5	6.0	16.1	6.2	16.1	0.0	0.0
43	ORFA	0.0	0.0	0.0	0.0	4.0	9.5	4.8	9.6	5.5	13.5	5.7	14.0	6.0	15.5	6.3	16.0	6.5	16.5	0.0	0.0	0.0	0.0	0.0	0.0
44	OPHY	0.0	0.0	4.5	0.0	5.5	9.3	5.6	10.0	6.2	13.0	6.3	16.3	6.4	16.8	6.4	16.9	6.6	18.0	6.7	0.0	6.8	18.0	0.0	0.0
45	OXLA	0.0	0.0	5.0	11.0	5.2	11.2	5.4	11.4	6.2	13.5	6.5	14.4	6.6	15.0	6.8	15.5	6.9	16.0	7.0	18.0	0.0	0.0	0.0	0.0
46	PEFR	3.5	0.0	4.3	9.5	5.0	12.5	5.2	12.8	5.8	14.0	6.1	16.9	6.2	18.0	6.6	0.0	6.7	0.0	7.2	0.0	0.0	0.0	0.0	0.0
47	PHHO	4.5	11.8	5.0	12.0	5.2	14.0	5.5	14.5	5.8	18.0	6.0	0.0	6.4	0.0	6.7	0.0	6.8	0.0	6.9	0.0	7.0	0.0	0.0	0.0
48	POSE	4.5	9.6	5.2	10.3	5.4	10.4	5.8	12.0	6.3	15.5	6.6	16.0	6.7	16.8	6.9	18.0	6.9	0.0	7.0	0.0	7.3	0.0	0.0	0.0
49	POA	0.0	0.0	4.0	10.2	5.5	10.8	5.9	11.0	6.1	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	PSTE	0.0	0.0	3.0	0.0	4.0	0.0	5.0	0.0	5.5	9.0	5.7	9.2	6.0	12.0	6.2	12.5	6.4	14.8	0.0	0.0	0.0	0.0	0.0	0.0
51	STAL	0.0	0.0	0.0	0.0	5.5	11.7	5.7	11.8	6.5	16.0	6.9	16.9	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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 52  SIHY     0.0  0.0   0.0  0.0   4.8  9.8   5.0 10.0   6.2 12.0   6.4 13.0   6.4 15.1   6.4 15.9   6.5 16.3   0.0  0.0   0.0  0.0   0.0  0.0
 53  SPCO     0.0  0.0   4.2  0.0   5.0  0.0   5.3 10.0   0.0  0.0   0.0  0.0   6.0 18.0   6.1  0.0   6.4  0.0   6.5  0.0   0.0  0.0   0.0  0.0
 54  STCO     3.8  9.3   4.3  9.5   5.0  9.9   5.2 10.8   5.8 12.0   6.1 16.1   6.2 16.9   6.3 18.0   6.5  0.0   6.6  0.0   6.8  0.0   0.0  0.0
 55  TECA     3.2  0.0   4.0  0.0   5.0  9.2   5.1  9.3   5.5  9.8   5.7 10.1   5.9 11.5   5.9 11.9   6.0 13.0   6.1 14.1   6.8 18.0   0.0  0.0
 56  TOIN     0.0  0.0   0.0  0.0   5.0 12.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 57  VINU     5.5 12.0   5.6 12.5   5.7 16.0   5.9 16.2   6.0 18.0   6.4  0.0   6.7  0.0   6.9  0.0   8.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 58  XASA     0.0  0.0   5.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 59  ZIVE     5.2 11.6   5.5 12.5   6.2 13.5   6.3 13.9   8.0 16.5   0.0 16.9   0.0 18.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
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PHENOLOGICAL INVENTORY STUDY AREA UPPER GOVT 1981 TYPE SITE AGSM-ARTR

		1 MAY		25 MAY		9 JUNE		17 JUNE		30 JUNE		13 JULY		31 JULY		10 AUG		24 AUG		11 SEPT		24 SEPT			
	SPECIES	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VER	REPR
1	AGSM	4.3	0.0	4.5	0.0	4.6	9.8	5.5	10.1	6.0	12.5	6.2	14.6	6.6	15.5	6.8	15.8	6.9	16.5	7.0	18.0	7.8	0.0	0.0	0.0
2	ALTE	3.5	0.0	4.5	11.4	5.2	12.8	5.6	13.3	6.5	14.5	6.8	15.2	8.0	16.5	0.0	16.8	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
3	ANDI	4.5	9.5	5.0	10.5	5.3	13.0	5.5	15.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	ARHO	3.8	0.0	4.3	10.1	5.0	11.5	5.3	12.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	ARHO2	2.9	0.0	3.6	11.1	4.5	12.0	5.0	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	ARTR	2.9	0.0	3.2	9.0	3.4	9.4	3.4	9.4	3.9	9.5	4.0	9.5	4.1	9.5	4.3	9.5	4.5	9.6	4.8	9.8	5.0	9.9	0.0	0.0
7	ASPU	5.0	10.5	5.3	12.0	5.4	14.0	5.6	15.1	6.0	16.0	6.5	18.0	6.6	0.0	6.9	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	BOGR	4.2	0.0	4.4	0.0	5.0	0.0	5.3	0.0	5.4	0.0	6.1	0.0	6.4	0.0	6.4	0.0	6.7	0.0	8.0	0.0	0.0	0.0	0.0	0.0
9	BRTE	0.0	0.0	0.0	0.0	0.0	0.0	6.0	13.5	6.2	14.5	6.8	16.0	8.0	16.7	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	CANU	3.6	0.0	4.0	0.0	4.6	11.1	5.3	12.5	5.8	13.0	6.3	14.3	6.5	15.8	6.8	16.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
11	CAS	4.0	10.0	5.1	11.5	5.5	12.5	5.7	12.8	6.1	13.5	6.7	15.4	6.8	16.8	6.9	16.9	6.9	18.8	0.0	0.0	0.0	0.0	0.0	0.0
12	CHVI	3.8	0.0	4.5	0.0	5.0	0.0	5.4	0.0	5.6	0.0	5.7	9.0	5.8	9.7	6.0	10.0	6.1	10.4	6.4	12.0	6.8	14.5	0.0	0.0
13	CRAC	4.5	0.0	5.0	11.5	5.3	11.7	5.5	12.5	6.5	16.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	CYMO	3.5	0.0	4.9	12.0	6.0	15.0	6.8	16.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	COLI	4.5	11.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	COPA2	0.0	0.0	5.0	11.8	0.0	0.0	0.0	0.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	DEPI	0.0	0.0	5.1	11.0	5.2	12.0	5.4	14.0	8.0	16.5	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	ERPU	0.0	0.0	4.5	11.0	5.0	11.5	5.2	12.3	5.7	12.0	6.3	16.0	6.3	16.7	6.5	16.9	6.6	18.0	6.9	0.0	8.0	0.0	0.0	0.0
19	HAAC	4.2	9.5	5.0	11.6	5.2	12.0	5.6	13.5	5.7	15.0	6.1	18.0	6.2	0.0	6.3	0.0	6.4	0.0	6.7	0.0	6.9	0.0	0.0	0.0
20	KOCR	3.5	9.5	5.1	10.0	5.4	11.0	5.5	11.7	5.7	13.0	6.2	15.7	6.3	16.3	6.4	16.4	6.5	16.7	6.6	18.7	0.0	0.0	0.0	0.0
21	LARE	0.0	0.0	5.0	12.5	5.5	13.5	0.0	0.0	0.0	0.0	8.0	16.8	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	LERE	4.0	0.0	4.8	9.6	5.5	11.4	6.0	11.8	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	LEPU	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	LOFO	0.0	0.0	0.0	0.0	5.5	13.5	6.0	14.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	MUDI	4.5	10.5	5.5	12.5	5.5	13.5	6.3	14.7	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	MACA	3.5	0.0	4.6	9.6	5.0	10.8	5.4	11.3	5.6	11.8	6.5	13.5	6.6	14.5	6.7	16.0	6.8	16.2	6.9	16.5	8.0	18.0	0.0	0.0
27	MIGR	0.0	0.0	0.0	0.0	6.2	14.0	6.8	16.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	OPPO	2.0	0.0	3.0	0.0	4.5	9.0	5.0	10.1	5.3	12.0	5.5	14.0	5.6	15.0	5.7	15.2	5.8	16.2	6.1	16.8	6.3	18.0	0.0	0.0
29	PECL	3.5	0.0	4.5	0.0	5.1	10.0	5.3	11.5	5.7	14.5	8.0	16.5	0.0	16.8	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	PHHO	4.5	11.5	4.9	12.2	5.0	13.0	5.4	15.0	5.7	18.0	6.5	0.0	6.7	0.0	6.8	0.0	6.9	0.0	8.0	0.0	0.0	0.0	0.0	0.0
31	PLPA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	11.8	8.0	15.5	0.0	16.5	0.0	16.9	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
32	POSE	4.5	10.0	4.9	10.8	6.1	10.9	6.3	12.0	6.7	15.0	6.9	16.8	6.9	16.9	6.9	18.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	SPCO	3.0	0.0	4.0	0.0	4.5	0.0	4.7	0.0	5.5	9.0	5.7	11.0	6.0	18.0	6.1	15.5	6.5	16.0	6.8	16.5	6.9	18.0	0.0	0.0
34	TRDU	3.3	0.0	3.8	9.1	4.5	9.0	4.9	11.0	6.2	15.0	6.4	15.5	6.5	15.8	6.6	16.5	6.9	18.0	8.0	0.0	0.0	0.0	0.0	0.0
35	STCO	3.0	0.0	4.0	9.3	4.8	10.0	5.4	11.5	5.7	13.0	6.0	14.5	6.3	16.5	6.4	16.9	6.4	18.0	6.5	0.0	6.7	0.0	0.0	0.0
36	VIAM	3.5	9.0	5.2	10.5	5.5	12.0	5.4	11.0	5.9	14.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	XASA	3.5	0.0	4.2	0.0	5.0	0.0	5.4	0.0	5.7	9.0	5.9	9.5	6.0	9.8	6.0	10.0	6.1	10.2	6.4	12.0	6.8	14.0	0.0	0.0
38	VINU	5.0	11.0	5.2	12.0	5.5	12.5	5.6	16.0	5.8	18.0	6.8	18.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE IV. Prime species intensive phenological inventory for 1981 by exclosure, plant species, and date collection date for each permanently identified plant. Intra-tabular tables of contents and check list of contents and check list of sampling times.

	Sampling Time											Page
	1a	1b	2	3	4	5	6	7	8	9	10	
Agropyron smithii												
Bud Kimball Exc.	X	X	X	X		X	X	X	X	X	X	65
Cumberland #3 Exc.		X	X	X	X	X	X	X	X	X	X	75
Demer Exc.	X	X	X	X	X	X	X	X	X	X	X	85
Farson Exc.		X	X	X	X	X	X	X	X	X	X	95
Horse Creek Exc.		X	X	X	X	X	X	X	X	X	X	105
Mesa Antelope Exc.		X	X	X	X	X	X	X	X	X	X	115
Owl Draw Exc.	X	X	X	X	X	X	X	X	X	X	X	125
Red Wash # 2 Exc.		X		X	X	X	X	X	X	X	X	135
Shoshoni # 7 Exc.		X	X	X	X	X	X	X	X	X	X	144
Sweetwater Exc.			X[1]	X	X	X	X	X	X	X	X	154
Upper Gov't Draw Exc.		X	X	X	X	X	X	X	X	X	X	164
Agropyron spicatum												
Bud Kimball			X	X	X	X	X	X	X	X	X	174
Cedar Mountain Exc.		X	X	X	X	X	X	X	X	X	X	183
Cumberland # 3 Exc.		X	X	X	X	X	X	X	X	X	X	193
Demer Exc.		X	X	X	X	X	X	X	X	X	X	203
Horse Creek Exc.		X	X	X	X	X	X	X	X	X	X	213
Owl Draw Exc.		X	X		X	X	X	X	X	X	X	223
Red Wash # 2 Exc.		X		X	X	X	X	X	X	X	X	232
Artemisia nova												
Horse Creek Exc.		X	X	X	X	X	X	X	X	X	X	241
Owl Draw Exc.		X	X	X	X	X	X	X	X	X	X	251
Sweetwater Exc.			X	X	X	X	X	X	X	X	X	261
Artemisia tridentata												
Bud Kimball Exc.		X	X	X	X	X	X	X	X	X	X	270
Cedar Mountain Exc.		X	X	X	X	X	X	X	X	X	X	280
Cumberland #3 Exc.		X	X	X	X	X	X	X	X	X	X	290
Demer Exc.		X	X	X	X	X	X	X	X	X	X	300
Farson Exc.		X	X	X	X	X	X	X	X	X	X	310
Horse Creek Exc.		X	X	X	X	X	X	X	X	X	X	320
Mesa Antelope Exc.		X	X	X	X	X	X	X	X	X	X	330
Owl Draw Exc.		X	X	X	X	X	X	X	X	X	X	340
Red Wash #2 Exc.		X		X	X	X	X	X	X	X	X	350
Shoshoni #7 Exc.		X	X	X	X	X	X	X	X	X	X	359
Sweetwater Exc.			X	X	X	X	X	X	X	X	X	369
Upper Gov't Draw Exc.		X	X	X	X	X	X	X	X	X	X	378

[1] AGSM intensive phenology was collected on two dates in this period - May 21 and May 25.

TABLE IV. (continued)

Average dates and ranges of dates for sampling periods			
Sampling Period	Average Date	Range of Dates	Days Since Previous Sampling Period Date
1a*	April 15	April 15	
1b	May 2	May 1 - May 2	16
2	May 23	May 19 - May 26	21
3	June 5	June 2 - June 9	13
4	June 16	June 15 - June 18	11
5	June 29	June 28 - July 1	13
6	July 14	July 13 - July 15	15
7	July 28	July 27 - July 31	14
8	August 11	August 10 - August 12	14
9	August 25	August 24 - August 25	14
10	September 12	September 11 - September 13	18

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* These were obtained only on the Bud Kimball, Demer and Owl Draw Exclosures. Prime species were only recorded for general development, not for the 20 transest plants.

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AGROPYRON SMITHII    STUDY AREA BUD KIMBAL         DATE   2  MAY    1981
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       PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.    NOS.
       NO.     STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/    VEG.
               VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM    PLANT
******************************************************************************
         1     3.9    0.0      .2     12.4    0.0     0.0     1.0
         2     4.2    0.0      .2     13.3    0.0     0.0     1.0
         3     4.4    0.0      .2     11.3    0.0     0.0     1.0
         4     4.8    0.0      .2     16.0    0.0     0.0     2.0
         5     3.6    0.0      .3     12.0    0.0     0.0     1.0
         6     3.9    0.0      .2     12.5    0.0     0.0     1.0
         7     4.3    0.0      .2     10.8    0.0     0.0     3.0
         8     4.3    0.0      .3     17.9    0.0     0.0     1.0
         9     4.6    0.0      .2     10.7    0.0     0.0     3.0
        10     5.0    0.0      .2     12.6    0.0     0.0     1.0
        11     4.7    0.0      .2     11.2    0.0     0.0     1.0
        12     3.6    0.0      .2      8.6    0.0     0.0     2.0
        13     4.6    0.0      .3     11.8    0.0     0.0     3.0
        14     4.9    0.0      .3     15.0    0.0     0.0     2.0
        15     3.2    0.0      .2      9.5    0.0     0.0     1.0
        16     3.5    0.0      .2     11.6    0.0     0.0     1.0
        17     4.4    0.0      .3     16.2    0.0     0.0     1.0
        18     3.3    0.0      .2      5.0    0.0     0.0     1.0
        19     4.8    0.0      .2     14.4    0.0     0.0     2.0
        20     4.9    0.0      .3     15.9    0.0     0.0     4.0


     MEAN      4.2    0.0      .2     12.4    0.0     0.0     1.7

  STD DEV       .6    0.0      .0      3.0    0.0     0.0      .9

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
  AGROPYRON SMITHII     STUDY AREA BUD KIMBAL          DATE 19   MAY    1981
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         PLANT   PHENOLOGICAL   MAX.   MAX.   MAX.    NOS.  NOS.
          NO.    STAGE  SCORE   LEAF   LEAF   SPIKE   SPK/  VEG.
                 VEG.   REPR.   WIDTH  HGHT.  HGHT.   CULM  PLANT
*****************************************************************************
            1     4.3    0.0     .3    14.8    0.0    0.0    1.0
            2     4.2    0.0     .2    14.0    0.0    0.0    1.0
            3     4.8    0.0     .2    14.0    0.0    0.0    1.0
            4     5.2    0.0     .3    22.0    0.0    0.0    2.0
            5     4.2    0.0     .3    16.0    0.0    0.0    1.0
            6     4.6    0.0     .2    13.0    0.0    0.0    1.0
            7     4.8    0.0     .2     8.3    0.0    0.0    2.0
            8     5.3    0.0     .3    20.2    0.0    0.0    1.0
            9     4.9    0.0     .2    11.6    0.0    0.0    1.0
           10     5.0    0.0     .3    11.5    0.0    0.0    1.0    MAJOR LEAF EATEN
           11     5.2    0.0     .3    16.4    0.0    0.0    1.0
           12     3.9    0.0     .3    10.8    0.0    0.0    1.0    NEW PLANT
           13     5.3    0.0     .3    15.1    0.0    0.0    1.0
           14     5.2    0.0     .3    19.2    0.0    0.0    2.0
           15     3.5    0.0     .2    17.0    0.0    0.0    1.0
           16     4.2    0.0     .1    11.0    0.0    0.0    1.0
           17     4.9    0.0     .3    16.6    0.0    0.0    1.0
           18     3.8    0.0     .2    11.5    0.0    0.0    1.0
           19     4.9    0.0     .2    15.6    0.0    0.0    2.0
           20     5.5    0.0     .3    22.0    0.0    0.0    4.0

      MEAN        4.7    0.0     .3    15.0    0.0    0.0    1.4

   STD DEV         .6    0.0     .1     3.8    0.0    0.0     .7

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII   STUDY AREA BUD KIMBAL   DATE 2 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT	
1	5.2	0.0	.3	24.0	0.0	0.0	1.0	
2	5.3	0.0	.3	17.5	0.0	0.0	1.0	
3	5.0	0.0	.2	14.0	0.0	0.0	1.0	
4	5.4	0.0	.3	22.5	0.0	0.0	2.0	
5	4.8	0.0	.3	19.0	0.0	0.0	1.0	
6	5.5	0.0	.3	16.5	0.0	0.0	1.0	
7	4.9	0.0	.2	12.5	0.0	0.0	2.0	
8	5.5	0.0	.3	25.5	0.0	0.0	1.0	
9	5.3	0.0	.3	20.0	0.0	0.0	1.0	
10	5.1	0.0	.2	14.5	0.0	0.0	1.0	
11	5.4	0.0	.3	18.5	0.0	0.0	1.0	
12	5.6	0.0	.3	20.0	0.0	0.0	1.0	NEW PLANT
13	5.3	0.0	.3	16.0	0.0	0.0	1.0	
14	5.3	0.0	.3	19.0	0.0	0.0	3.0	
15	4.5	0.0	.2	13.5	0.0	0.0	1.0	
16	4.3	0.0	.2	11.0	0.0	0.0	1.0	
17	5.1	0.0	.3	16.0	0.0	0.0	1.0	
18	3.9	0.0	.2	15.0	0.0	0.0	1.0	
19	5.5	0.0	.3	17.0	0.0	0.0	2.0	
20	5.6	0.0	.3	25.0	0.0	0.0	1.0	
MEAN	5.1	0.0	.3	17.9	0.0	0.0	1.3	
STD DEV	.5	0.0	.0	4.1	0.0	0.0	.6	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA BUD KIMBAL DATE 17 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE	SCORE	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT	
	VEG.	REPR.						
1	5.5	0.0	.3	12.0	0.0	0.0	1.0	
2	5.6	0.0	.3	15.7	0.0	0.0	1.0	
3	5.5	0.0	.2	14.5	0.0	0.0	1.0	
4	5.7	0.0	.3	22.0	0.0	0.0	2.0	
5	5.7	0.0	.3	19.4	0.0	0.0	1.0	
6	5.8	0.0	.3	17.2	0.0	0.0	1.0	
7	5.8	0.0	.2	13.4	0.0	0.0	2.0	
8	5.8	0.0	.3	25.7	0.0	0.0	1.0	
9	5.7	0.0	.3	21.5	0.0	0.0	1.0	
10	5.9	0.0	.2	14.5	0.0	0.0	1.0	
11	5.8	0.0	.3	18.5	0.0	0.0	1.0	
12	5.8	0.0	.3	24.4	0.0	0.0	1.0	
13	5.8	0.0	.3	16.5	0.0	0.0	1.0	
14	5.9	0.0	.3	21.2	0.0	0.0	3.0	
15	5.7	0.0	.2	13.5	0.0	0.0	1.0	
16	5.8	0.0	.2	12.0	0.0	0.0	2.0	NEW PLANT
17	5.9	0.0	.3	17.4	0.0	0.0	1.0	
18	5.7	0.0	.2	15.4	0.0	0.0	1.0	
19	5.9	0.0	.3	17.6	0.0	0.0	2.0	
20	5.7	0.0	.3	16.2	0.0	0.0	1.0	
MEAN	5.7	0.0	.3	17.4	0.0	0.0	1.3	
STD DEV	.1	0.0	.0	3.9	0.0	0.0	.6	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA BUD KIMBAL DATE 29 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.0	0.0	.2	13.0	0.0	0.0	0.0
2	5.9	0.0	.2	20.7	0.0	0.0	0.0
3	6.0	0.0	.2	14.3	0.0	0.0	0.0
4	6.0	0.0	.2	20.8	0.0	0.0	0.0
5	6.0	0.0	.1	19.0	0.0	0.0	0.0
6	5.8	0.0	.2	18.2	0.0	0.0	0.0
7	5.8	0.0	.1	13.6	0.0	0.0	0.0
8	6.0	0.0	.3	27.0	0.0	0.0	0.0
9	5.9	0.0	.2	20.5	0.0	0.0	0.0
10	5.9	0.0	.3	15.0	0.0	0.0	0.0
11	5.8	0.0	.3	19.0	0.0	0.0	0.0
12	5.9	0.0	.3	23.2	0.0	0.0	0.0
13	5.9	0.0	.3	18.1	0.0	0.0	0.0
14	6.0	0.0	.4	15.0	0.0	0.0	0.0
15	6.0	0.0	.2	13.5	0.0	0.0	0.0
16	5.8	0.0	.2	13.0	0.0	0.0	0.0
17	5.9	0.0	.3	17.6	0.0	0.0	0.0
18	6.0	0.0	.2	14.8	0.0	0.0	0.0
19	6.0	0.0	.3	17.4	0.0	0.0	0.0
20	6.0	0.0	.2	15.6	0.0	0.0	0.0
MEAN	5.9	0.0	.2	17.5	0.0	0.0	0.0
STD DEV	.1	0.0	.1	3.7	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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AGROPYRON SMITHII      STUDY AREA BUD KIMBAL          DATE 14   JULY   1981
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      PLANT  PHENOLOGICAL  MAX.   MAX.   MAX.   NOS.   NOS.
       NO.   STAGE  SCORE  LEAF   LEAF   SPIKE  SPK/   VEG.
             VEG.   REPR.  WIDTH  HGHT.  HGHT.  CULM   PLANT
****************************************************************************************
         1   6.1    0.0     .1    13.0   0.0    0.0    0.0   1
         2   6.3    0.0     .1    20.5   0.0    0.0    1.0
         3   6.8    0.0     .1    13.2   0.0    0.0    1.0
         4   6.4    0.0     .1    22.0   0.0    0.0    2.0
         5   6.2    0.0     .1    19.1   0.0    0.0    1.0
         6   6.2    0.0     .1    17.7   0.0    0.0    1.0
         7   6.4    0.0     .1    16.3   0.0    0.0    1.0
         8   6.5    0.0     .2    26.6   0.0    0.0    1.0
         9   6.5    0.0     .1    21.5   0.0    0.0    1.0
        10   6.5    0.0     .1    12.6   0.0    0.0    1.0
        11   6.4    0.0     .1    19.2   0.0    0.0    1.0
        12   6.5    0.0     .2    24.8   0.0    0.0    1.0
        13   6.4    0.0     .1    18.0   0.0    0.0    1.0
        14   6.5    0.0     .1    19.8   0.0    0.0    2.0
        15   6.5    0.0     .1    13.7   0.0    0.0    1.0
        16   6.6    0.0     .1    13.6   0.0    0.0    2.0
        17   6.4    0.0     .2    18.4   0.0    0.0    1.0
        18   6.6    0.0     .1    15.5   0.0    0.0    1.0
        19   6.5    0.0     .1    17.4   0.0    0.0    2.0
        20   6.3    0.0     .1    27.5   0.0    0.0    1.0


    MEAN     6.4    0.0     .1    18.5   0.0    0.0    1.2

  STD DEV     .2    0.0     .0     4.4   0.0    0.0     .4

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII   STUDY AREA BUD KIMBAL   DATE 28 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.3	0.0	.1	13.0	0.0	0.0	1.0
2	6.4	0.0	.2	20.6	0.0	0.0	1.0
3	6.5	0.0	.1	13.3	0.0	0.0	1.0
4	6.4	0.0	.2	20.2	0.0	0.0	2.0
5	6.2	0.0	.2	19.2	0.0	0.0	1.0
6	6.3	0.0	.2	18.3	0.0	0.0	1.0
7	6.2	0.0	.2	18.0	0.0	0.0	1.0
8	6.3	0.0	.2	25.9	0.0	0.0	1.0
9	6.6	0.0	.1	12.5	0.0	0.0	1.0
10	6.3	0.0	.2	15.7	0.0	0.0	1.0
11	6.3	0.0	.2	19.1	0.0	0.0	1.0
12	6.1	0.0	.2	25.1	0.0	0.0	1.0
13	6.3	0.0	.2	16.7	0.0	0.0	1.0
14	6.3	0.0	.2	24.2	0.0	0.0	1.0
15	6.5	0.0	.1	14.2	0.0	0.0	1.0
16	6.5	0.0	.1	13.3	0.0	0.0	1.0
17	6.4	0.0	.2	17.7	0.0	0.0	1.0
18	6.6	0.0	.1	15.6	0.0	0.0	1.0
19	6.6	0.0	.1	14.6	0.0	0.0	2.0
20	6.4	0.0	.2	24.9	0.0	0.0	1.0
MEAN	6.4	0.0	.2	18.1	0.0	0.0	1.1
STD DEV	.1	0.0	.0	4.3	0.0	0.0	.3

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII   STUDY AREA BUD KIMBAL   DATE 11 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT	
1	6.9	0.0	.1	12.6	0.0	0.0	0.0	
2	6.4	0.0	.1	17.3	0.0	0.0	0.0	
3	6.9	0.0	.1	14.5	0.0	0.0	0.0	
4	6.8	0.0	.1	9.8	0.0	0.0	0.0	
5	6.8	0.0	.1	15.5	0.0	0.0	0.0	
6	6.9	0.0	.1	9.2	0.0	0.0	0.0	
7	6.4	0.0	.1	14.0	0.0	0.0	0.0	
8	6.1	0.0	.1	25.8	0.0	0.0	0.0	
9	6.7	0.0	.1	22.0	0.0	0.0	0.0	
10	6.6	0.0	.1	5.0	0.0	0.0	0.0	EXTENSIVE USE BY GRASSHOPPERS
11	6.3	0.0	.1	15.4	0.0	0.0	0.0	
12	6.8	0.0	.1	8.5	0.0	0.0	0.0	
13	6.4	0.0	.2	14.6	0.0	0.0	0.0	
14	6.4	0.0	.2	19.7	0.0	0.0	0.0	
15	6.6	0.0	.1	13.3	0.0	0.0	0.0	
16	6.4	0.0	.1	13.0	0.0	0.0	0.0	
17	6.5	0.0	.2	18.6	0.0	0.0	0.0	
18	6.9	0.0	.1	16.0	0.0	0.0	0.0	
19	6.8	0.0	.1	14.8	0.0	0.0	0.0	
20	6.4	0.0	.1	18.2	0.0	0.0	0.0	
MEAN	6.6	0.0	.1	14.9	0.0	0.0	0.0	
STD DEV	.2	0.0	.0	4.8	0.0	0.0	0.0	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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AGROPYRON SMITHII     STUDY AREA BUD KIMBAL          DATE 25   AUGUST 1981
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      PLANT   PHENOLOGICAL  MAX.    MAX.    MAX.    NOS.   NOS.
       NO.    STAGE  SCORE  LEAF    LEAF    SPIKE   SPK/   VEG.
              VEG.   REPR.  WIDTH   HGHT.   HGHT.   CULM   PLANT
*****************************************************************************
        1     6.6    0.0     .1     13.0    0.0     0.0    0.0
        2     6.7    0.0     .1     17.2    0.0     0.0    0.0
        3     6.5    0.0     .1     15.2    0.0     0.0    0.0
        4     6.8    0.0     .1     23.9    0.0     0.0    0.0
        5     6.6    0.0     .1     14.0    0.0     0.0    0.0
        6     6.6    0.0     .1     17.1    0.0     0.0    0.0
        7     6.5    0.0     .1     17.8    0.0     0.0    0.0
        8     6.6    0.0     .2     26.4    0.0     0.0    0.0
        9     6.5    0.0     .1     12.8    0.0     0.0    0.0
       10     6.5    0.0     .1     15.5    0.0     0.0    0.0
       11     6.7    0.0     .1     15.6    0.0     0.0    0.0
       12     6.5    0.0     .1      9.0    0.0     0.0    0.0
       13     6.5    0.0     .1     18.2    0.0     0.0    0.0
       14     6.5    0.0     .1     16.0    0.0     0.0    0.0
       15     6.6    0.0     .1      9.6    0.0     0.0    0.0
       16     6.5    0.0     .1     13.3    0.0     0.0    0.0
       17     6.5    0.0     .2     18.5    0.0     0.0    0.0
       18     6.6    0.0     .1     16.0    0.0     0.0    0.0
       19     6.6    0.0     .1     14.6    0.0     0.0    0.0
       20     6.5    0.0     .2     26.7    0.0     0.0    0.0


     MEAN     6.6    0.0     .1     16.5    0.0     0.0    0.0

  STD DEV      .1    0.0     .0      4.7    0.0     0.0    0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
  AGROPYRON SMITHII      STUDY AREA BUD KIMBAL          DATE 12   SEPT   1981
 ---------------------                ----------                  ------------------

          PLANT  PHENOLOGICAL  MAX.   MAX.   MAX.   NOS.   NOS.
           NO.   STAGE  SCORE  LEAF   LEAF   SPIKE  SPK/   VEG.
                 VEG.   REPR.  WIDTH  HGHT.  HGHT.  CULM   PLANT
********************************************************************************
            1     6.9    0.0    0.0    0.0    0.0    0.0    0.0
            2     7.0    0.0    0.0    0.0    0.0    0.0    0.0
            3     6.9    0.0    0.0    0.0    0.0    0.0    0.0
            4     6.9    0.0    0.0    0.0    0.0    0.0    0.0
            5     6.9    0.0    0.0    0.0    0.0    0.0    0.0
            6     6.9    0.0    0.0    0.0    0.0    0.0    0.0
            7     7.0    0.0    0.0    0.0    0.0    0.0    0.0
            8     7.1    0.0    0.0    0.0    0.0    0.0    0.0
            9     6.9    0.0    0.0    0.0    0.0    0.0    0.0
           10     6.9    0.0    0.0    0.0    0.0    0.0    0.0
           11     6.9    0.0    0.0    0.0    0.0    0.0    0.0
           12     7.0    0.0    0.0    0.0    0.0    0.0    0.0
           13     8.0    0.0    0.0    0.0    0.0    0.0    0.0
           14     8.0    0.0    0.0    0.0    0.0    0.0    0.0
           15     6.9    0.0    0.0    0.0    0.0    0.0    0.0
           16     7.0    0.0    0.0    0.0    0.0    0.0    0.0
           17     7.0    0.0    0.0    0.0    0.0    0.0    0.0
           18     6.9    0.0    0.0    0.0    0.0    0.0    0.0
           19     8.0    0.0    0.0    0.0    0.0    0.0    0.0
           20     7.1    0.0    0.0    0.0    0.0    0.0    0.0


        MEAN      7.1    0.0    0.0    0.0    0.0    0.0    0.0

     STD DEV      .4     0.0    0.0    0.0    0.0    0.0    0.0

     0.0 = NOT RECORDED

     MEASUREMENTS IN CENTIMETERS
 AGROPYRON SMITHII   STUDY AREA  CUMBER. 3           DATE 02   MAY    1981
---------------------            ----------            --------------------


     PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
      NO.    STAGE   SCORE  LEAF    LEAF    SPIKE   SPK/   VEG.
             VEG.    REPR.  WIDTH   HGHT.   HGHT.   CULM   PLANT
*************************************************************************************
        1     4.2     0.0     .2    12.4     0.0     0.0    4.0
        2     4.5     0.0     .2    12.6     0.0     0.0    2.0
        3     4.1     0.0     .2    12.7     0.0     0.0    1.0
        4     4.4     0.0     .2     8.1     0.0     0.0    1.0
        5     4.7     0.0     .2    18.4     0.0     0.0    4.0
        6     4.8     0.0     .2    14.6     0.0     0.0    4.0
        7     4.4     0.0     .2    16.2     0.0     0.0    2.0
        8     4.6     0.0     .2    12.8     0.0     0.0    3.0
        9     4.2     0.0     .2    14.9     0.0     0.0    2.0
       10     4.6     0.0     .2    18.0     0.0     0.0    4.0
       11     4.5     0.0     .2    12.9     0.0     0.0    3.0
       12     4.3     0.0     .3    15.5     0.0     0.0    1.0
       13     4.6     0.0     .2    13.2     0.0     0.0    2.0
       14     4.1     0.0     .2    16.1     0.0     0.0    2.0
       15     4.4     0.0     .2    11.2     0.0     0.0    4.0
       16     4.7     0.0     .2    15.9     0.0     0.0    4.0
       17     4.7     0.0     .2    15.1     0.0     0.0    4.0
       18     4.1     0.0     .2    16.5     0.0     0.0    2.0
       19     4.5     0.0     .2    15.6     0.0     0.0    3.0
       20     4.6     0.0     .2    18.1     0.0     0.0    4.0


     MEAN     4.5     0.0     .2    14.5     0.0     0.0    2.8

  STD DEV      .2     0.0     .0     2.6     0.0     0.0    1.2

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
```

```
   AGROPYRON SMITHII   STUDY AREA  CUMBER. 3         DATE 26   MAY    1981
-------------------                ----------             -----------------

     PLANT  PHENOLOGICAL  MAX.    MAX.    MAX.    NOS.   NOS.
      NO.   STAGE  SCORE  LEAF    LEAF    SPIKE   SPK/   VEG.
            VEG.   REPR.  WIDTH   HGHT.   HGHT.   CULM   PLANT
***************************************************************************************
         1  4.6    0.0      .2    23.1    0.0     0.0     4.0
         2  4.5    0.0      .2    16.0    0.0     0.0     2.0
         3  4.9    0.0      .3    23.0    0.0     0.0     2.0
         4  4.6    0.0      .3    19.5    0.0     0.0     1.0
         5  4.9    0.0      .3    23.0    0.0     0.0     2.0
         6  4.6    0.0      .2    17.0    0.0     0.0     2.0
         7  4.8    0.0      .3    15.9    0.0     0.0     1.0
         8  4.6    0.0      .2    18.0    0.0     0.0     1.0
         9  4.8    0.0      .3    20.5    0.0     0.0     2.0
        10  4.7    0.0      .2    23.5    0.0     0.0     3.0
        11  4.5    0.0      .2    13.4    0.0     0.0     2.0
        12  3.2    0.0      .2    16.6    0.0     0.0     2.0
        13  3.2    0.0      .2    22.5    0.0     0.0     4.0
        14  3.8    0.0      .2    11.1    0.0     0.0     2.0
        15  3.0    0.0      .3    23.0    0.0     0.0     1.0
        16  3.1    0.0      .2    16.0    0.0     0.0     2.0
        17  4.0    0.0      .3     0.0    0.0     0.0     5.0
        18  4.0    0.0      .2     0.0    0.0     0.0     1.0
        19  4.0    0.0      .2     0.0    0.0     0.0     1.0
        20  4.0    0.0      .2     0.0    0.0     0.0     1.0

     MEAN   4.2    0.0      .2    18.9    0.0     0.0     2.1

   STD DEV   .6    0.0      .0     3.9    0.0     0.0     1.1

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII   STUDY AREA CUMBER. 3   DATE 05 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	4.9	0.0	.3	21.0	0.0	0.0	1.0
2	4.9	0.0	.3	15.5	0.0	0.0	3.0
3	4.9	0.0	.3	25.3	0.0	0.0	1.0
4	4.8	0.0	.2	19.5	0.0	0.0	2.0
5	5.4	0.0	.2	21.0	0.0	0.0	2.0
6	4.8	0.0	.3	19.0	0.0	0.0	2.0
7	4.9	0.0	.3	17.0	0.0	0.0	1.0
8	4.8	0.0	.3	19.5	0.0	0.0	2.0
9	5.3	0.0	.3	21.5	0.0	0.0	4.0
10	4.7	0.0	.3	27.0	0.0	0.0	4.0
11	4.9	0.0	.3	22.5	0.0	0.0	3.0
12	5.7	0.0	.3	18.0	0.0	0.0	1.0
13	4.6	0.0	.2	22.5	0.0	0.0	4.0
14	4.9	0.0	.2	20.5	0.0	0.0	3.0
15	4.6	0.0	.3	33.5	0.0	0.0	2.0
16	4.8	0.0	.3	23.0	0.0	0.0	3.0
17	4.3	0.0	.2	22.5	0.0	0.0	4.0
18	4.6	0.0	.2	20.0	0.0	0.0	2.0
19	4.6	0.0	.3	22.0	0.0	0.0	1.0
20	4.7	0.0	.2	21.5	0.0	0.0	1.0
MEAN	4.9	0.0	.3	21.6	0.0	0.0	2.3
STD DEV	.3	0.0	.0	3.8	0.0	0.0	1.1

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII   STUDY AREA CUMBER. 3   DATE 16 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	5.3	0.0	.3	29.6	0.0	0.0	1.0
2	5.1	0.0	.3	16.6	0.0	0.0	3.0
3	5.2	0.0	.3	22.9	0.0	0.0	1.0
4	5.4	0.0	.3	20.5	0.0	0.0	2.0
5	5.4	0.0	.2	21.2	0.0	0.0	2.0
6	4.9	0.0	.3	20.9	0.0	0.0	2.0
7	5.5	0.0	.3	23.4	0.0	0.0	1.0
8	5.2	0.0	.3	26.3	0.0	0.0	2.0
9	5.4	0.0	.3	22.9	0.0	0.0	4.0
10	5.0	0.0	.3	27.7	0.0	0.0	4.0
11	5.2	0.0	.3	22.9	0.0	0.0	3.0
12	5.7	0.0	.3	18.7	0.0	0.0	1.0
13	5.0	0.0	.3	24.2	0.0	0.0	3.0
14	5.0	0.0	.3	22.2	0.0	0.0	1.0
15	4.9	0.0	.3	33.8	0.0	0.0	2.0
16	4.9	0.0	.3	25.0	0.0	0.0	3.0
17	4.4	0.0	.3	23.1	0.0	0.0	4.0
18	4.7	0.0	.2	21.5	0.0	0.0	2.0
19	4.7	0.0	.3	23.6	0.0	0.0	2.0
20	4.8	0.0	.3	21.7	0.0	0.0	1.0
MEAN	5.1	0.0	.3	23.4	0.0	0.0	2.2
STD DEV	.3	0.0	.0	3.8	0.0	0.0	1.1

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
  AGROPYRON SMITHII    STUDY AREA  CUMBER. 3            DATE 30   JUNE   1981
  -----------------                ----------                -----------------

        PLANT   PHENOLOGICAL     MAX.    MAX.    MAX.    NOS.   NOS.
         NO.    STAGE   SCORE    LEAF    LEAF    SPIKE   SPK/   VEG.
                VEG.    REPR.    WIDTH   HGHT.   HGHT.   CULM   PLANT
****************************************************************************
          1     5.4     0.0      .2      22.4    0.0     0.0    0.0
          2     5.5     0.0      .2      11.4    0.0     0.0    0.0
          3     5.6     0.0      .2      26.4    0.0     0.0    0.0
          4     5.6     0.0      .3      25.7    0.0     0.0    0.0
          5     5.7     0.0      .2      20.5    0.0     0.0    0.0
          6     5.5     0.0      .2      18.0    0.0     0.0    0.0
          7     5.6     0.0      .3      17.4    0.0     0.0    0.0
          8     5.5     0.0      .3      18.5    0.0     0.0    0.0
          9     5.7     0.0      .3      23.1    0.0     0.0    0.0
         10     5.6     0.0      .2      26.6    0.0     0.0    0.0
         11     5.7     0.0      .2      21.3    0.0     0.0    0.0
         12     5.7     0.0      .3      18.0    0.0     0.0    0.0
         13     5.5     0.0      .3      20.8    0.0     0.0    0.0
         14     5.6     0.0      .3      22.2    0.0     0.0    0.0
         15     5.5     0.0      .3      27.5    0.0     0.0    0.0
         16     5.4     0.0      .2      23.6    0.0     0.0    0.0
         17     5.4     0.0      .3      24.5    0.0     0.0    0.0
         18     5.6     0.0      .2      21.8    0.0     0.0    0.0
         19     5.6     0.0      .2      17.5    0.0     0.0    0.0
         20     5.5     0.0      .2      17.6    0.0     0.0    0.0


      MEAN      5.6     0.0      .2      21.2    0.0     0.0    0.0

    STD DEV      .1     0.0      .1       4.0    0.0     0.0    0.0


    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
```

```
   AGROPYRON SMITHII    STUDY AREA  CUMBER. 3           DATE 14   JULY   1981
 ---------------------             ----------                ------------------

        PLANT  PHENOLOGICAL  MAX.   MAX.   MAX.   NOS.  NOS.
         NO.   STAGE  SCORE  LEAF   LEAF   SPIKE  SPK/  VEG.
               VEG.   REPR.  WIDTH  HGHT.  HGHT.  CULM  PLANT
***************************************************************************
          1    6.2    0.0    0.0    30.0   0.0    0.0    0.0
          2    6.1    0.0    0.0    29.0   0.0    0.0    0.0
          3    6.2    0.0    0.0    20.0   0.0    0.0    0.0
          4    6.0    0.0    0.0    11.0   0.0    0.0    0.0
          5    6.2    0.0    0.0    32.0   0.0    0.0    0.0
          6    6.2    0.0    0.0    18.0   0.0    0.0    0.0
          7    6.3    0.0    0.0    21.5   0.0    0.0    0.0
          8    6.3    0.0    0.0    26.0   0.0    0.0    0.0
          9    6.2    0.0    0.0    23.0   0.0    0.0    0.0
         10    6.2    0.0    0.0    19.0   0.0    0.0    0.0
         11    6.2    0.0    0.0    33.0   0.0    0.0    0.0
         12    6.2    0.0    0.0    15.0   0.0    0.0    0.0
         13    6.1    0.0    0.0    24.0   0.0    0.0    0.0
         14    6.2    0.0    0.0    27.0   0.0    0.0    0.0
         15    6.1    0.0    0.0    11.0   0.0    0.0    0.0
         16    6.3    0.0    0.0    29.5   0.0    0.0    0.0
         17    6.3    0.0    0.0    22.0   0.0    0.0    0.0
         18    6.3    0.0    0.0    11.0   0.0    0.0    0.0
         19    6.2    0.0    0.0    11.0   0.0    0.0    0.0
         20    6.0    0.0    0.0    14.0   0.0    0.0    0.0


      MEAN     6.2    0.0    0.0    21.4   0.0    0.0    0.0

   STD DEV      .1    0.0    0.0     7.4   0.0    0.0    0.0

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII STUDY AREA CUMBER. 3 DATE 28 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.1	0.0	.1	30.0	0.0	0.0	0.0
2	6.2	0.0	.1	17.5	0.0	0.0	0.0
3	6.1	0.0	.1	26.8	0.0	0.0	0.0
4	6.1	0.0	.1	18.4	0.0	0.0	0.0
5	6.2	0.0	.1	20.5	0.0	0.0	0.0
6	6.1	0.0	.1	20.0	0.0	0.0	0.0
7	6.1	0.0	.1	19.7	0.0	0.0	0.0
8	6.1	0.0	.1	26.6	0.0	0.0	0.0
9	6.1	0.0	.1	23.0	0.0	0.0	0.0
10	6.2	0.0	.1	27.2	0.0	0.0	0.0
11	6.1	0.0	.1	23.5	0.0	0.0	0.0
12	6.3	0.0	.1	14.3	0.0	0.0	0.0
13	6.3	0.0	.1	16.8	0.0	0.0	0.0
14	6.3	0.0	.1	22.2	0.0	0.0	0.0
15	6.1	0.0	.1	23.4	0.0	0.0	0.0
16	6.1	0.0	.1	25.1	0.0	0.0	0.0
17	6.1	0.0	.1	31.3	0.0	0.0	0.0
18	6.1	0.0	.1	31.5	0.0	0.0	0.0
19	6.3	0.0	.1	18.0	0.0	0.0	0.0
20	6.2	0.0	.1	21.3	0.0	0.0	0.0
MEAN	6.2	0.0	.1	22.9	0.0	0.0	0.0
STD DEV	.1	0.0	.0	4.9	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
AGROPYRON SMITHII   STUDY AREA  CUMBER. 3            DATE 11   AUGUST 1981
--------------------            ----------                     -----------------

      PLANT  PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
       NO.   STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
             VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
*********************************************************************************
        1    6.5    0.0      .2     29.5    0.0     0.0    0.0
        2    6.5    0.0      .1     25.3    0.0     0.0    0.0
        3    6.8    0.0      .1     26.2    0.0     0.0    0.0
        4    6.9    0.0      .1     20.0    0.0     0.0    0.0
        5    6.5    0.0      .2     29.8    0.0     0.0    0.0
        6    7.0    0.0      .1     20.0    0.0     0.0    0.0
        7    7.0    0.0      .1     18.4    0.0     0.0    0.0
        8    6.6    0.0      .2     37.0    0.0     0.0    0.0
        9    6.6    0.0      .1     24.7    0.0     0.0    0.0
       10    7.0    0.0      .1     16.9    0.0     0.0    0.0
       11    7.0    0.0      .1     20.6    0.0     0.0    0.0
       12    7.0    0.0      .1     20.0    0.0     0.0    0.0
       13    7.0    0.0      .1     25.1    0.0     0.0    0.0
       14    6.6    0.0      .2     29.5    0.0     0.0    0.0
       15    7.0    0.0      .1     20.5    0.0     0.0    0.0
       16    6.9    0.0      .1     17.6    0.0     0.0    0.0
       17    6.7    0.0      .1     22.3    0.0     0.0    0.0
       18    6.6    0.0      .1     31.0    0.0     0.0    0.0
       19    7.0    0.0      .1     10.0    0.0     0.0    0.0
       20    7.0    0.0      .1     22.0    0.0     0.0    0.0


     MEAN    6.8    0.0      .1     23.3    0.0     0.0    0.0

  STD DEV     .2    0.0      .0      6.1    0.0     0.0    0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII   STUDY AREA CUMBER. 3   DATE 25 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.8	0.0	0.0	29.3	0.0	0.0	0.0
2	6.9	0.0	0.0	17.0	0.0	0.0	0.0
3	6.8	0.0	0.0	26.5	0.0	0.0	0.0
4	6.8	0.0	0.0	26.1	0.0	0.0	0.0
5	6.9	0.0	0.0	19.1	0.0	0.0	0.0
6	6.9	0.0	0.0	20.2	0.0	0.0	0.0
7	6.9	0.0	0.0	17.0	0.0	0.0	0.0
8	6.8	0.0	0.0	25.7	0.0	0.0	0.0
9	6.9	0.0	0.0	22.6	0.0	0.0	0.0
10	6.9	0.0	0.0	28.0	0.0	0.0	0.0
11	6.9	0.0	0.0	21.5	0.0	0.0	0.0
12	6.9	0.0	0.0	13.9	0.0	0.0	0.0
13	6.9	0.0	0.0	16.0	0.0	0.0	0.0
14	6.9	0.0	0.0	16.6	0.0	0.0	0.0
15	6.9	0.0	0.0	19.0	0.0	0.0	0.0
16	6.9	0.0	0.0	30.3	0.0	0.0	0.0
17	6.8	0.0	0.0	26.4	0.0	0.0	0.0
18	6.9	0.0	0.0	24.2	0.0	0.0	0.0
19	6.9	0.0	0.0	17.6	0.0	0.0	0.0
20	6.9	0.0	0.0	19.0	0.0	0.0	0.0
MEAN	6.9	0.0	0.0	21.8	0.0	0.0	0.0
STD DEV	.0	0.0	0.0	4.9	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
  AGROPYRON SMITHII    STUDY AREA  CUMBER. 3            DATE 13   SEPT   1981
---------------------             ----------            -------------------

        PLANT   PHENOLOGICAL   MAX.    MAX.   MAX.    NOS.   NOS.
         NO.    STAGE  SCORE   LEAF    LEAF   SPIKE   SPK/   VEG.
                VEG.   REPR.   WIDTH   HGHT.  HGHT.   CULM   PLANT
*****************************************************************************
           1    6.7    0.0     0.0     21.4   0.0     0.0     0.0
           2    6.9    0.0     0.0     20.0   0.0     0.0     0.0
           3    6.9    0.0     0.0     19.4   0.0     0.0     0.0
           4    6.9    0.0     0.0     22.3   0.0     0.0     0.0
           5    6.9    0.0     0.0     17.0   0.0     0.0     0.0
           6    6.9    0.0     0.0     21.1   0.0     0.0     0.0
           7    6.9    0.0     0.0     16.7   0.0     0.0     0.0
           8    6.9    0.0     0.0     22.3   0.0     0.0     0.0
           9    6.9    0.0     0.0     24.7   0.0     0.0     0.0
          10    6.9    0.0     0.0     22.1   0.0     0.0     0.0
          11    6.8    0.0     0.0     26.1   0.0     0.0     0.0
          12    6.9    0.0     0.0     22.1   0.0     0.0     0.0
          13    6.9    0.0     0.0     15.6   0.0     0.0     0.0
          14    6.9    0.0     0.0     16.3   0.0     0.0     0.0
          15    6.8    0.0     0.0     29.5   0.0     0.0     0.0
          16    6.9    0.0     0.0     28.9   0.0     0.0     0.0
          17    6.9    0.0     0.0     25.5   0.0     0.0     0.0
          18    6.9    0.0     0.0     25.5   0.0     0.0     0.0
          19    6.9    0.0     0.0     21.0   0.0     0.0     0.0
          20    6.9    0.0     0.0     21.2   0.0     0.0     0.0

      MEAN      6.9    0.0     0.0     21.9   0.0     0.0     0.0

  STD DEV        .1    0.0     0.0      3.9   0.0     0.0     0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
```

```
   AGROPYRON SMITHII    STUDY AREA  DEMER                 DATE  2   MAY    1981
------------------------           ------------                 -----------------


        PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
         NO.    STAGE   SCORE  LEAF    LEAF    SPIKE   SPK/   VEG.
                VEG.    REPR.  WIDTH   HGHT.   HGHT.   CULM   PLANT
*****************************************************************************
          1     5.2     0.0     .2     13.2     0.0     0.0    2.0
          2     4.8     0.0     .1     16.1     0.0     0.0    1.0
          3     4.4     0.0     .1     12.8     0.0     0.0    1.0
          4     4.3     0.0     .1     12.4     0.0     0.0    1.0
          5     4.6     0.0     .2     16.2     0.0     0.0    2.0
          6     5.4     0.0     .2     16.6     0.0     0.0    1.0
          7     4.7     0.0     .1     12.6     0.0     0.0    1.0
          8     4.2     0.0     .1      9.9     0.0     0.0    2.0
          9     4.8     0.0     .2     16.5     0.0     0.0    3.0
         10     4.2     0.0     .1     17.2     0.0     0.0    1.0
         11     3.8     0.0     .1     14.7     0.0     0.0    1.0
         12     4.5     0.0     .1     12.7     0.0     0.0    1.0
         13     4.9     0.0     .2     17.5     0.0     0.0    1.0
         14     4.6     0.0     .2     15.0     0.0     0.0    1.0      90% UTILIZATION
         15     5.2     0.0     .2     14.2     0.0     0.0    1.0
         16     4.1     0.0     .2     16.1     0.0     0.0    1.0
         17     4.4     0.0     .1     12.8     0.0     0.0    2.0
         18     4.8     0.0     .1     25.0     0.0     0.0    2.0
         19     4.1     0.0     .1     15.0     0.0     0.0    1.0
         20     4.0     0.0     .1     12.2     0.0     0.0    1.0


       MEAN      4.5     0.0     .1     14.9     0.0     0.0    1.4

    STD DEV       .4     0.0     .1      3.1     0.0     0.0     .6


    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
   AGROPYRON SMITHII     STUDY AREA   DEMER                    DATE 20   MAY    1981
-------------------                 ----------                    -----------------

        PLANT   PHENOLOGICAL  MAX.    MAX.    MAX.    NOS.   NOS.
         NO.    STAGE  SCORE  LEAF    LEAF    SPIKE   SPK/   VEG.
                VEG.   REPR.  WIDTH   HGHT.   HGHT.   CULM   PLANT
*****************************************************************************************
          1     5.4    0.0     .3     18.0    0.0     0.0     2.0
          2     5.7    0.0     .3     18.8    0.0     0.0     1.0
          3     5.1    0.0     .2     18.0    0.0     0.0     1.0
          4     5.3    0.0     .3     18.1    0.0     0.0     1.0
          5     5.3    0.0     .3     18.3    0.0     0.0     2.0
          6     5.4    0.0     .2     19.1    0.0     0.0     1.0
          7     4.9    0.0     .2     15.7    0.0     0.0     1.0
          8     5.2    0.0     .2     13.5    0.0     0.0     2.0
          9     5.3    0.0     .2     19.2    0.0     0.0     3.0
         10     4.9    0.0     .2     16.5    0.0     0.0     1.0
         11     4.8    0.0     .2     14.4    0.0     0.0     1.0
         12     4.7    0.0     .2     15.4    0.0     0.0     1.0
         13     5.8    0.0     .3     18.3    0.0     0.0     1.0
         14     4.7    0.0     .3     19.8    0.0     0.0     1.0
         15     5.7    0.0     .2     16.8    0.0     0.0     2.0
         16     4.9    0.0     .3     17.2    0.0     0.0     1.0
         17     4.5    0.0     .3     13.2    0.0     0.0     2.0
         18     5.2    0.0     .2     24.7    0.0     0.0     2.0
         19     5.7    0.0     .2     15.5    0.0     0.0     1.0
         20     5.2    0.0     .1     13.5    0.0     0.0     1.0


      MEAN      5.2    0.0     .2     17.2    0.0     0.0     1.4

   STD DEV       .4    0.0     .1      2.7    0.0     0.0      .6

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII STUDY AREA DEMER DATE 2 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	5.8	0.0	.3	19.4	0.0	0.0	2.0
2	5.9	0.0	.3	21.0	0.0	0.0	3.0
3	5.8	0.0	.2	12.8	0.0	0.0	1.0
4	5.8	0.0	.2	14.9	0.0	0.0	1.0
5	5.3	0.0	.2	17.0	0.0	0.0	2.0
6	5.4	0.0	.2	21.2	0.0	0.0	2.0
7	5.9	0.0	.2	17.0	0.0	0.0	2.0
8	5.8	0.0	.3	19.5	0.0	0.0	1.0
9	5.7	0.0	.3	18.0	0.0	0.0	2.0
10	5.4	0.0	.2	17.2	0.0	0.0	1.0
11	5.1	0.0	.2	17.0	0.0	0.0	4.0
12	5.4	0.0	.2	17.0	0.0	0.0	1.0
13	5.9	0.0	.4	22.0	0.0	0.0	1.0
14	5.6	0.0	.3	21.5	0.0	0.0	1.0
15	5.9	0.0	.3	18.3	0.0	0.0	2.0
16	5.7	0.0	.3	23.0	0.0	0.0	1.0
17	4.6	0.0	.2	12.6	0.0	0.0	1.0
18	5.7	0.0	.2	23.6	0.0	0.0	2.0
19	5.9	0.0	.2	19.1	0.0	0.0	1.0
20	5.8	0.0	.3	22.2	0.0	0.0	1.0
MEAN	5.6	0.0	.3	18.7	0.0	0.0	1.6
STD DEV	.3	0.0	.1	3.1	0.0	0.0	.8

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
  AGROPYRON SMITHII   STUDY AREA  DEMER                DATE 17   JUNE   1981
  -----------------               ----------                -----------------

      PLANT  PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
       NO.   STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
             VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
*****************************************************************************
        1    5.8    0.0     0.0     15.5    0.0     0.0     0.0
        2    6.0    0.0     0.0     23.6    0.0     0.0     0.0
        3    6.0    0.0     0.0     17.3    0.0     0.0     0.0
        4    5.9    0.0     0.0     22.5    0.0     0.0     0.0
        5    6.0    0.0     0.0     24.4    0.0     0.0     0.0
        6    5.9    0.0     0.0     16.5    0.0     0.0     0.0
        7    6.0    0.0     0.0     18.4    0.0     0.0     0.0
        8    6.0    0.0     0.0     19.4    0.0     0.0     0.0
        9    5.8    0.0     0.0     16.0    0.0     0.0     0.0
       10    6.0    0.0     0.0     19.4    0.0     0.0     0.0
       11    5.9    0.0     0.0     16.6    0.0     0.0     0.0
       12    5.9    0.0     0.0     18.1    0.0     0.0     0.0
       13    6.0    0.0     0.0     23.7    0.0     0.0     0.0
       14    5.9    0.0     0.0     22.1    0.0     0.0     0.0
       15    6.0    0.0     0.0     26.3    0.0     0.0     0.0
       16    5.9    0.0     0.0     17.6    0.0     0.0     0.0
       17    5.9    0.0     0.0     18.2    0.0     0.0     0.0
       18    6.0    0.0     0.0     24.5    0.0     0.0     0.0
       19    5.9    0.0     0.0     15.2    0.0     0.0     0.0
       20    5.9    0.0     0.0     24.2    0.0     0.0     0.0

   MEAN      5.9    0.0     0.0     20.0    0.0     0.0     0.0

 STD DEV      .1    0.0     0.0      3.6    0.0     0.0     0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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```
AGROPYRON SMITHII   STUDY AREA  DEMER               DATE 29    JUNE    1981
-------------------             ----------               -----------------


     PLANT  PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
      NO.   STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
            VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
*************************************************************************************
       1    6.1    0.0      .2     19.4    0.0     0.0    0.0
       2    6.1    0.0      .3     23.3    0.0     0.0    0.0
       3    6.0    0.0      .2     18.5    0.0     0.0    0.0
       4    5.9    0.0      .3     21.9    0.0     0.0    0.0
       5    6.0    0.0      .3     24.4    0.0     0.0    0.0
       6    6.0    0.0      .3     17.4    0.0     0.0    0.0
       7    6.0    0.0      .2     18.2    0.0     0.0    0.0
       8    6.0    0.0      .2     20.0    0.0     0.0    0.0
       9    5.9    0.0      .3     23.0    0.0     0.0    0.0
      10    6.0    0.0      .2     13.0    0.0     0.0    0.0
      11    6.7    0.0      .1     13.0    0.0     0.0    0.0
      12    6.2    0.0      .1     13.0    0.0     0.0    0.0
      13    6.0    0.0      .2     25.6    0.0     0.0    0.0
      14    5.9    0.0      .2     23.0    0.0     0.0    0.0
      15    6.0    0.0      .2     21.0    0.0     0.0    0.0
      16    6.0    0.0      .3     24.0    0.0     0.0    0.0
      17    6.0    0.0      .2     22.0    0.0     0.0    0.0
      18    6.0    0.0      .2     16.0    0.0     0.0    0.0
      19    5.9    0.0      .2     20.5    0.0     0.0    0.0
      20    6.0    0.0      .3     24.5    0.0     0.0    0.0


   MEAN      6.0    0.0     .2     20.1    0.0     0.0    0.0

 STD DEV      .2    0.0     .1      4.0    0.0     0.0    0.0


 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
```

```
  AGROPYRON SMITHII    STUDY AREA  DEMER                  DATE 14   JULY   1981
----------------------              ----------                 ------------------

       PLANT  PHENOLOGICAL  MAX.    MAX.    MAX.    NOS.   NOS.
        NO.   STAGE  SCORE  LEAF    LEAF    SPIKE   SPK/   VEG.
              VEG.   REPR.  WIDTH   HGHT.   HGHT.   CULM   PLANT
*****************************************************************************************
           1  6.0    0.0      .1    19.2    0.0     0.0     0.0
           2  6.2    0.0      .1    23.5    0.0     0.0     0.0
           3  6.2    0.0      .1    18.0    0.0     0.0     0.0     REPRO CULMS SPARSE
           4  6.1    0.0      .1    22.9    0.0     0.0     0.0     AVER REPRO SCORE= 14.8
           5  6.3    0.0      .2    25.7    0.0     0.0     0.0
           6  6.0    0.0      .1    17.2    0.0     0.0     0.0
           7  6.1    0.0      .1    16.7    0.0     0.0     0.0
           8  6.0    0.0      .1    14.7    0.0     0.0     0.0     NEW PLANT
           9  6.1    0.0      .2    22.2    0.0     0.0     0.0
          10  6.8    0.0      .1    11.2    0.0     0.0     0.0
          11  6.0    0.0      .1    15.2    0.0     0.0     0.0
          12  6.2    0.0      .2    24.4    0.0     0.0     0.0     NEW PLANT
          13  6.1    0.0      .2    23.5    0.0     0.0     0.0
          14  6.1    0.0      .2    22.3    0.0     0.0     0.0
          15  6.1    0.0      .2    26.0    0.0     0.0     0.0
          16  6.4    0.0      .1    17.2    0.0     0.0     0.0
          17  6.1    0.0      .1    18.2    0.0     0.0     0.0
          18  6.2    0.0      .2    28.6    0.0     0.0     0.0
          19  6.1    0.0      .2    19.0    0.0     0.0     0.0
          20  6.3    0.0      .2    24.1    0.0     0.0     0.0

    MEAN      6.2    0.0      .1    20.5    0.0     0.0     0.0

  STD DEV      .2    0.0      .1     4.5    0.0     0.0     0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII   STUDY AREA DEMER   DATE 28 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.4	0.0	0.0	15.5	0.0	0.0	0.0
2	6.8	0.0	0.0	19.0	0.0	0.0	0.0
3	6.5	0.0	0.0	19.9	0.0	0.0	0.0
4	6.8	0.0	0.0	22.1	0.0	0.0	0.0
5	6.8	0.0	0.0	25.6	0.0	0.0	0.0
6	6.4	0.0	0.0	17.5	0.0	0.0	0.0
7	6.5	0.0	0.0	19.9	0.0	0.0	0.0
8	6.6	0.0	0.0	14.4	0.0	0.0	0.0
9	6.5	0.0	0.0	14.6	0.0	0.0	0.0
10	6.3	0.0	0.0	16.0	0.0	0.0	0.0
11	6.6	0.0	0.0	14.4	0.0	0.0	0.0
12	6.4	0.0	0.0	25.0	0.0	0.0	0.0
13	6.3	0.0	0.0	23.4	0.0	0.0	0.0
14	6.4	0.0	0.0	23.0	0.0	0.0	0.0
15	6.4	0.0	0.0	25.8	0.0	0.0	0.0
16	6.4	0.0	0.0	21.4	0.0	0.0	0.0
17	6.8	0.0	0.0	18.0	0.0	0.0	0.0
18	6.2	0.0	0.0	28.0	0.0	0.0	0.0
19	6.5	0.0	0.0	14.0	0.0	0.0	0.0
20	6.4	0.0	0.0	20.6	0.0	0.0	0.0
MEAN	6.5	0.0	0.0	19.9	0.0	0.0	0.0
STD DEV	.2	0.0	0.0	4.3	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA DEMER DATE 11 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.4	0.0	.1	15.1	0.0	0.0	0.0
2	6.4	0.0	.1	19.7	0.0	0.0	0.0
3	6.6	0.0	.1	17.5	0.0	0.0	0.0
4	6.8	0.0	.1	23.0	0.0	0.0	0.0
5	6.5	0.0	.1	23.3	0.0	0.0	0.0
6	6.3	0.0	.1	17.4	0.0	0.0	0.0
7	6.5	0.0	.1	17.0	0.0	0.0	0.0
8	6.5	0.0	.1	14.5	0.0	0.0	0.0
9	6.2	0.0	.1	18.2	0.0	0.0	0.0
10	6.8	0.0	.1	17.0	0.0	0.0	0.0
11	6.9	0.0	.1	13.1	0.0	0.0	0.0
12	6.7	0.0	.1	18.0	0.0	0.0	0.0
13	6.3	0.0	.1	23.2	0.0	0.0	0.0
14	6.3	0.0	.1	22.7	0.0	0.0	0.0
15	6.6	16.0	.1	18.0	34.0	0.0	0.0
16	6.4	0.0	.1	19.5	0.0	0.0	0.0
17	6.6	0.0	.1	17.5	0.0	0.0	0.0
18	6.4	0.0	.1	24.0	0.0	0.0	0.0
19	6.7	0.0	.1	18.7	0.0	0.0	0.0
20	6.7	0.0	.1	19.0	0.0	0.0	0.0
MEAN	6.5	16.0	.1	18.8	34.0	0.0	0.0
STD DEV	.2	0.0	.0	3.1	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII   STUDY AREA DEMER   DATE 25 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.8	0.0	.1	19.4	0.0	0.0	0.0
2	6.5	0.0	.1	21.1	0.0	0.0	0.0
3	6.6	0.0	.1	18.6	0.0	0.0	0.0
4	6.7	0.0	.1	23.2	0.0	0.0	0.0
5	6.7	0.0	.1	10.2	0.0	0.0	0.0
6	6.5	0.0	.1	17.6	0.0	0.0	0.0
7	6.5	0.0	.1	18.9	0.0	0.0	0.0
8	6.6	0.0	.1	14.5	0.0	0.0	0.0
9	6.4	0.0	.1	18.5	0.0	0.0	0.0
10	6.7	0.0	.1	18.0	0.0	0.0	0.0
11	6.8	0.0	.1	16.9	0.0	0.0	0.0
12	6.7	0.0	.1	25.0	0.0	0.0	0.0
13	6.5	0.0	.2	23.6	0.0	0.0	0.0
14	6.5	0.0	.1	22.7	0.0	0.0	0.0
15	6.6	0.0	.1	26.2	0.0	0.0	0.0
16	6.8	0.0	.1	17.7	0.0	0.0	0.0
17	6.8	0.0	.1	17.4	0.0	0.0	0.0
18	6.4	0.0	.1	24.5	0.0	0.0	0.0
19	6.7	0.0	.1	19.0	0.0	0.0	0.0
20	6.6	0.0	.1	24.3	0.0	0.0	0.0
MEAN	6.6	0.0	.1	19.9	0.0	0.0	0.0
STD DEV	.1	0.0	.0	4.0	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA DEMER DATE 12 SEPT 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.9	0.0	0.0	0.0	0.0	0.0	0.0
2	7.1	0.0	0.0	0.0	0.0	0.0	0.0
3	7.0	0.0	0.0	0.0	0.0	0.0	0.0
4	6.9	0.0	0.0	0.0	0.0	0.0	0.0
5	6.9	0.0	0.0	0.0	0.0	0.0	0.0
6	8.0	0.0	0.0	0.0	0.0	0.0	0.0
7	8.0	0.0	0.0	0.0	0.0	0.0	0.0
8	6.9	0.0	0.0	0.0	0.0	0.0	0.0
9	6.9	0.0	0.0	0.0	0.0	0.0	0.0
10	7.1	0.0	0.0	0.0	0.0	0.0	0.0
11	7.1	0.0	0.0	0.0	0.0	0.0	0.0
12	7.0	0.0	0.0	0.0	0.0	0.0	0.0
13	7.0	0.0	0.0	0.0	0.0	0.0	0.0
14	7.1	0.0	0.0	0.0	0.0	0.0	0.0
15	6.9	0.0	0.0	0.0	0.0	0.0	0.0
16	8.0	0.0	0.0	0.0	0.0	0.0	0.0
17	8.0	0.0	0.0	0.0	0.0	0.0	0.0
18	8.0	0.0	0.0	0.0	0.0	0.0	0.0
19	6.9	0.0	0.0	0.0	0.0	0.0	0.0
20	7.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	7.2	0.0	0.0	0.0	0.0	0.0	0.0
STD DEV	.5	0.0	0.0	0.0	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA FARSON DATE 02 MAY 1981

PLANT NO.	PHENOLOGICAL		MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
	STAGE VEG.	SCORE REPR.					
1	4.7	0.0	.2	11.8	0.0	0.0	1.0
2	4.6	0.0	.2	15.1	0.0	0.0	1.0
3	3.9	0.0	.1	11.0	0.0	0.0	1.0
4	3.9	0.0	.5	11.1	0.0	0.0	1.0
5	3.9	0.0	.1	13.8	0.0	0.0	1.0
6	4.1	0.0	.1	8.7	0.0	0.0	1.0
7	3.9	0.0	.1	8.1	0.0	0.0	1.0
8	4.2	0.0	.1	10.2	0.0	0.0	1.0
9	4.3	0.0	.1	7.8	0.0	0.0	1.0
10	4.3	0.0	.1	9.4	0.0	0.0	4.0
11	3.9	0.0	.1	8.1	0.0	0.0	2.0
12	4.2	0.0	.1	13.7	0.0	0.0	2.0
13	4.0	0.0	.1	7.3	0.0	0.0	1.0
14	4.1	0.0	.1	10.2	0.0	0.0	1.0
15	3.8	0.0	.1	9.9	0.0	0.0	1.0
16	4.6	0.0	.1	10.8	0.0	0.0	1.0
17	4.5	0.0	.2	13.3	0.0	0.0	1.0
18	4.6	0.0	.2	14.7	0.0	0.0	1.0
19	4.2	0.0	.1	8.5	0.0	0.0	2.0
20	4.7	0.0	.2	15.5	0.0	0.0	1.0
MEAN	4.2	0.0	.1	11.0	0.0	0.0	1.3
STD DEV	.3	0.0	.1	2.6	0.0	0.0	.7

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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  AGROPYRON SMITHII   STUDY AREA  FARSON             DATE 26   MAY   1981
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      PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
       NO.    STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
              VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
***************************************************************************
        1     4.8    0.0      .2     13.0    0.0     0.0     4.0
        2     4.2    0.0      .2     16.8    0.0     0.0     1.0
        3     4.6    0.0      .3     16.6    0.0     0.0     3.0
        4     5.0    0.0      .3     21.0    0.0     0.0     1.0
        5     3.6    0.0      .2     15.6    0.0     0.0     4.0
        6     3.4    0.0      .2     15.0    0.0     0.0     2.0
        7     4.9    0.0      .3     14.7    0.0     0.0     1.0
        8     5.1    0.0      .2     15.9    0.0     0.0     1.0
        9     4.4    0.0      .2     12.5    0.0     0.0     1.0
       10     5.0    0.0      .2     14.4    0.0     0.0     6.0
       11     4.8    0.0      .2     15.2    0.0     0.0     1.0
       12     4.4    9.0      .2     16.2    0.0     0.0     1.0
       13     3.8    0.0      .3     19.2    0.0     0.0     1.0
       14     5.0    0.0      .3     17.7    0.0     0.0     1.0
       15     4.8    0.0      .2     16.3    0.0     0.0     1.0
       16     5.1    0.0      .2     14.2    0.0     0.0     3.0
       17     4.0    0.0      .3     20.2    0.0     0.0     2.0
       18     4.2    0.0      .3     19.1    0.0     0.0     1.0
       19     3.8    0.0      .2     15.3    0.0     0.0     1.0
       20     5.1    0.0      .4     22.5    0.0     0.0     5.0

    MEAN      4.5    9.0      .2     16.6    0.0     0.0     2.1

  STD DEV      .5    0.0      .1      2.6    0.0     0.0     1.6

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
  AGROPYRON SMITHII    STUDY AREA  FARSON               DATE 05   JUNE   1981
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      PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
       NO.    STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
              VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
*****************************************************************************
         1    4.8    0.0      .2     18.0    0.0     0.0    4.0
         2    4.8    0.0      .3     18.5    0.0     0.0    2.0
         3    5.1    0.0      .2     19.0    0.0     0.0    3.0
         4    5.1    0.0      .3     23.5    0.0     0.0    2.0
         5    3.9    0.0      .2     17.0    0.0     0.0    4.0
         6    3.9    0.0      .2     15.5    0.0     0.0    2.0
         7    4.9    0.0      .3     16.0    0.0     0.0    1.0
         8    5.7    0.0      .3     13.0    0.0     0.0    1.0
         9    5.3    0.0      .2     12.5    0.0     0.0    2.0
        10    5.2    0.0      .2     16.5    0.0     0.0    6.0
        11    4.9    0.0      .3     20.0    0.0     0.0    1.0
        12    4.5    0.0      .3     21.5    0.0     0.0    1.0
        13    4.6    0.0      .4     24.0    0.0     0.0    1.0
        14    5.3    0.0      .3     16.0    0.0     0.0    1.0
        15    4.9    0.0      .3     18.0    0.0     0.0    1.0
        16    5.1    0.0      .3     16.0    0.0     0.0    2.0
        17    4.8    0.0      .3     22.5    0.0     0.0    2.0
        18    4.8    0.0      .2     12.5    0.0     0.0    4.0
        19    4.4    0.0      .3     17.5    0.0     0.0    1.0
        20    5.7    0.0      .4     33.0    0.0     0.0    6.0


     MEAN     4.9    0.0      .3     18.5    0.0     0.0    2.4

   STD DEV     .5    0.0      .1      4.8    0.0     0.0    1.6

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII   STUDY AREA FARSON   DATE 16 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	4.9	0.0	.3	18.5	0.0	0.0	3.0
2	4.9	0.0	.3	21.2	0.0	0.0	2.0
3	5.5	0.0	.3	19.1	0.0	0.0	3.0
4	5.2	0.0	.3	23.8	0.0	0.0	2.0
5	4.3	0.0	.2	17.2	0.0	0.0	4.0
6	3.9	0.0	.2	16.6	0.0	0.0	2.0
7	4.9	0.0	.3	17.8	0.0	0.0	1.0
8	5.8	0.0	.3	16.0	0.0	0.0	1.0
9	5.6	0.0	.2	13.2	0.0	0.0	2.0
10	5.3	0.0	.3	17.8	0.0	0.0	6.0
11	4.9	0.0	.3	22.1	0.0	0.0	1.0
12	4.8	0.0	.2	21.8	0.0	0.0	1.0
13	4.9	0.0	.3	24.9	0.0	0.0	1.0
14	5.3	0.0	.3	25.1	0.0	0.0	1.0
15	5.2	0.0	.3	21.8	0.0	0.0	1.0
16	5.2	0.0	.3	19.0	0.0	0.0	2.0
17	4.9	0.0	.3	18.7	0.0	0.0	2.0
18	4.9	0.0	.2	13.6	0.0	0.0	4.0
19	4.7	0.0	.3	19.6	0.0	0.0	1.0
20	5.8	0.0	.3	34.0	0.0	0.0	6.0
MEAN	5.0	0.0	.3	20.1	0.0	0.0	2.3
STD DEV	.5	0.0	.0	4.6	0.0	0.0	1.6

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA FARSON DATE 30 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT	
1	4.9	0.0	.2	18.0	0.0	0.0	0.0	NEW PLANT
2	5.5	0.0	.2	26.5	0.0	0.0	0.0	
3	5.5	0.0	.3	19.5	0.0	0.0	0.0	
4	5.5	0.0	.2	24.3	0.0	0.0	0.0	
5	5.5	0.0	.1	17.8	0.0	0.0	0.0	
6	4.0	0.0	.1	16.7	0.0	0.0	0.0	
7	5.5	0.0	.2	15.0	0.0	0.0	0.0	
8	5.8	0.0	.3	14.9	0.0	0.0	0.0	
9	5.5	0.0	.2	13.0	0.0	0.0	0.0	
10	5.5	0.0	.2	17.0	0.0	0.0	0.0	
11	5.5	0.0	.3	23.1	0.0	0.0	0.0	
12	5.5	0.0	.2	18.0	0.0	0.0	0.0	
13	5.5	0.0	.3	24.3	0.0	0.0	0.0	
14	5.5	0.0	.3	25.4	0.0	0.0	0.0	
15	5.2	0.0	.2	19.0	0.0	0.0	0.0	
16	5.5	0.0	.2	17.8	0.0	0.0	0.0	
17	5.5	0.0	.3	22.2	0.0	0.0	0.0	
18	4.9	0.0	.1	13.2	0.0	0.0	0.0	
19	5.1	0.0	.3	19.9	0.0	0.0	0.0	
20	4.6	0.0	.3	23.0	0.0	0.0	0.0	
MEAN	5.3	0.0	.2	19.4	0.0	0.0	0.0	
STD DEV	.4	0.0	.1	4.0	0.0	0.0	0.0	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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  AGROPYRON SMITHII    STUDY AREA  FARSON               DATE 14    JULY   1981
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      PLANT    PHENOLOGICAL     MAX.     MAX.     MAX.     NOS.    NOS.
       NO.     STAGE   SCORE    LEAF     LEAF     SPIKE    SPK/    VEG.
               VEG.    REPR.    WIDTH    HGHT.    HGHT.    CULM    PLANT
*************************************************************************************
         1     6.1     0.0      0.0     17.5      0.0      0.0      0.0
         2     6.5     0.0      0.0     18.5      0.0      0.0      0.0
         3     6.2     0.0      0.0     14.3      0.0      0.0      0.0
         4     6.1     0.0      0.0     22.3      0.0      0.0      0.0
         5     6.4     0.0      0.0     16.6      0.0      0.0      0.0
         6     6.1     0.0      0.0     15.5      0.0      0.0      0.0
         7     6.2     0.0      0.0     18.2      0.0      0.0      0.0
         8     6.3     0.0      0.0     10.5      0.0      0.0      0.0
         9     6.4     0.0      0.0     12.0      0.0      0.0      0.0
        10     6.3     0.0      0.0     17.6      0.0      0.0      0.0
        11     6.1     0.0      0.0     21.6      0.0      0.0      0.0
        12     6.1     0.0      0.0     18.5      0.0      0.0      0.0
        13     6.4     0.0      0.0     24.3      0.0      0.0      0.0
        14     6.1     0.0      0.0     22.6      0.0      0.0      0.0
        15     6.1     0.0      0.0     21.0      0.0      0.0      0.0
        16     6.2     0.0      0.0     17.1      0.0      0.0      0.0
        17     6.2     0.0      0.0     16.1      0.0      0.0      0.0
        18     6.0     0.0      0.0     13.0      0.0      0.0      0.0
        19     6.1     0.0      0.0     24.5      0.0      0.0      0.0
        20     6.2     0.0      0.0     33.0      0.0      0.0      0.0

    MEAN       6.2     0.0      0.0     18.7      0.0      0.0      0.0

  STD DEV       .1     0.0      0.0      5.1      0.0      0.0      0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
  AGROPYRON SMITHII    STUDY AREA  FARSON              DATE 28   JULY  1981
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    PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
     NO.    STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
            VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
*****************************************************************************
      1     6.0    0.0      .1     18.2    0.0     0.0    0.0
      2     6.0    0.0      .3     30.4    0.0     0.0    0.0
      3     6.1    0.0      .2     17.3    0.0     0.0    0.0
      4     6.0    0.0      .2     29.2    0.0     0.0    0.0
      5     6.1    0.0      .1      9.3    0.0     0.0    0.0
      6     6.4    0.0      .1     16.0    0.0     0.0    0.0
      7     6.2    0.0      .1     15.5    0.0     0.0    0.0
      8     6.1    0.0      .1     14.8    0.0     0.0    0.0
      9     6.3    0.0      .1     12.5    0.0     0.0    0.0
     10     6.1    0.0      .1     17.1    0.0     0.0    0.0
     11     6.0    0.0      .1     20.7    0.0     0.0    0.0
     12     6.1    0.0      .1     19.1    0.0     0.0    0.0
     13     6.4    0.0      .1     19.8    0.0     0.0    0.0
     14     6.2    0.0      .2     26.0    0.0     0.0    0.0
     15     6.1    0.0      .1     21.3    0.0     0.0    0.0
     16     6.0    0.0      .1     18.2    0.0     0.0    0.0
     17     6.1    0.0      .1     20.0    0.0     0.0    0.0
     18     6.1    0.0      .1     19.5    0.0     0.0    0.0
     19     6.0    0.0      .1     19.0    0.0     0.0    0.0
     20     6.0    0.0      .3     33.5    0.0     0.0    0.0


   MEAN     6.1    0.0      .1     19.9    0.0     0.0    0.0

 STD DEV     .1    0.0      .1      5.9    0.0     0.0    0.0


 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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  AGROPYRON SMITHII    STUDY AREA  FARSON                DATE 11   AUGUST 1981
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         PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
          NO.    STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
                 VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
****************************************************************************
           1     6.5    0.0      .1     17.0    0.0     0.0    0.0
           2     6.6    0.0      .2     30.0    0.0     0.0    0.0
           3     6.6    0.0      .1     13.3    0.0     0.0    0.0
           4     6.6    0.0      .1     17.9    0.0     0.0    0.0
           5     6.5    0.0      .2     19.0    0.0     0.0    0.0
           6     6.7    0.0      .1     12.0    0.0     0.0    0.0
           7     6.6    0.0      .1     14.1    0.0     0.0    0.0
           8     6.7    0.0      .1     15.3    0.0     0.0    0.0
           9     6.6    0.0      .1     12.0    0.0     0.0    0.0
          10     6.5    0.0      .1     18.1    0.0     0.0    0.0
          11     6.6    0.0      .1     16.6    0.0     0.0    0.0
          12     6.7    0.0      .1     19.3    0.0     0.0    0.0
          13     6.6    0.0      .2     25.6    0.0     0.0    0.0
          14     6.4    0.0      .2     26.1    0.0     0.0    0.0
          15     6.5    0.0      .2     21.5    0.0     0.0    0.0
          16     6.5    0.0      .2     18.4    0.0     0.0    0.0
          17     6.6    0.0      .2     22.1    0.0     0.0    0.0
          18     6.6    0.0      .1     12.2    0.0     0.0    0.0
          19     6.8    0.0      .2     19.4    0.0     0.0    0.0
          20     6.1    0.0      .3     30.3    0.0     0.0    0.0


       MEAN      6.6    0.0      .2     19.0    0.0     0.0    0.0

    STD DEV       .1    0.0      .1      5.6    0.0     0.0    0.0

    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII   STUDY AREA FARSON   DATE 24 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT	
1	6.5	0.0	.1	17.8	0.0	0.0	0.0	
2	6.7	0.0	.2	30.0	0.0	0.0	0.0	
3	6.7	0.0	.1	19.1	0.0	0.0	0.0	
4	6.6	0.0	.1	21.0	0.0	0.0	0.0	
5	6.6	0.0	.1	19.5	0.0	0.0	0.0	
6	6.8	0.0	.1	12.0	0.0	0.0	0.0	
7	6.7	0.0	.1	12.7	0.0	0.0	0.0	
8	6.8	0.0	.1	15.5	0.0	0.0	0.0	
9	6.7	0.0	.1	12.4	0.0	0.0	0.0	
10	6.5	0.0	.1	17.3	0.0	0.0	0.0	
11	6.6	0.0	.1	21.0	0.0	0.0	0.0	
12	6.8	0.0	.1	25.0	0.0	0.0	0.0	
13	6.6	0.0	.1	25.3	0.0	0.0	0.0	NEW PLANT
14	6.5	0.0	.2	25.1	0.0	0.0	0.0	
15	6.6	0.0	.1	21.1	0.0	0.0	0.0	
16	6.5	0.0	.1	18.0	0.0	0.0	0.0	
17	6.6	0.0	.1	18.0	0.0	0.0	0.0	
18	6.6	0.0	.1	20.2	0.0	0.0	0.0	
19	6.8	0.0	.1	19.0	0.0	0.0	0.0	
20	6.3	0.0	0.0	32.0	0.0	0.0	0.0	
MEAN	6.6	0.0	.1	20.1	0.0	0.0	0.0	
STD DEV	.1	0.0	.0	5.3	0.0	0.0	0.0	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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  AGROPYRON SMITHII    STUDY AREA  FARSON                 DATE 12   SEPT   1981
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        PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
         NO.    STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
                VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
************************************************************************************
          1     6.9    0.0     0.0     20.5    0.0     0.0     0.0
          2     6.8    0.0     0.0     17.5    0.0     0.0     0.0
          3     6.9    0.0     0.0     19.0    0.0     0.0     0.0
          4     6.9    0.0     0.0     15.5    0.0     0.0     0.0
          5     6.9    0.0     0.0     17.6    0.0     0.0     0.0
          6     6.9    0.0     0.0     19.9    0.0     0.0     0.0
          7     6.9    0.0     0.0     18.5    0.0     0.0     0.0
          8     6.9    0.0     0.0     16.9    0.0     0.0     0.0
          9     6.6    0.0     0.0     16.8    0.0     0.0     0.0
         10     6.8   18.0     0.0     16.1   34.1     0.0     0.0
         11     6.7    0.0     0.0     17.2    0.0     0.0     0.0
         12     6.9    0.0     0.0     20.7    0.0     0.0     0.0
         13     6.8    0.0     0.0     18.5    0.0     0.0     0.0
         14     6.9    0.0     0.0     23.5    0.0     0.0     0.0
         15     6.7    0.0     0.0     20.2    0.0     0.0     0.0
         16     6.7    0.0     0.0     14.1    0.0     0.0     0.0
         17     6.8    0.0     0.0     18.6    0.0     0.0     0.0
         18     6.7    0.0     0.0     18.7    0.0     0.0     0.0
         19     6.8    0.0     0.0     17.6    0.0     0.0     0.0
         20     6.8    0.0     0.0     20.8    0.0     0.0     0.0


      MEAN      6.8   18.0     0.0     18.4   34.1     0.0     0.0

   STD DEV       .1    0.0     0.0      2.2    0.0     0.0     0.0

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII       STUDY AREA  HORSE CR.             DATE 02   MAY    1981
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       PLANT   PHENOLOGICAL   MAX.     MAX.     MAX.     NOS.    NOS.
        NO.    STAGE   SCORE  LEAF     LEAF     SPIKE    SPK/    VEG.
               VEG.    REPR.  WIDTH    HGHT.    HGHT.    CULM    PLANT
***********************************************************************************
          1    4.5     0.0     0.0     21.3     0.0      0.0     0.0
          2    4.1     0.0     0.0     13.0     0.0      0.0     0.0
          3    5.2     0.0     0.0      8.9     0.0      0.0     0.0
          4    3.9     0.0     0.0     12.6     0.0      0.0     0.0
          5    4.9     0.0     0.0     14.6     0.0      0.0     0.0
          6    5.1     0.0     0.0     12.5     0.0      0.0     0.0
          7    4.6     0.0     0.0     13.2     0.0      0.0     0.0
          8    3.8     0.0     0.0      8.1     0.0      0.0     0.0
          9    4.3     0.0     0.0     12.0     0.0      0.0     0.0
         10    4.2     0.0     0.0     11.5     0.0      0.0     0.0
         11    4.7     0.0     0.0      9.0     0.0      0.0     0.0
         12    4.4     0.0     0.0     14.5     0.0      0.0     0.0
         13    5.4     0.0     0.0     12.2     0.0      0.0     0.0
         14    4.2     0.0     0.0     12.6     0.0      0.0     0.0
         15    3.2     0.0     0.0     12.6     0.0      0.0     0.0
         16    4.3     0.0     0.0     16.3     0.0      0.0     0.0
         17    4.8     0.0     0.0     16.5     0.0      0.0     0.0
         18    4.0     0.0     0.0     10.6     0.0      0.0     0.0
         19    4.3     0.0     0.0     10.9     0.0      0.0     0.0
         20    4.4     0.0     0.0      8.0     0.0      0.0     0.0


       MEAN    4.4     0.0     0.0     12.5     0.0      0.0     0.0

    STD DEV     .5     0.0     0.0      3.2     0.0      0.0     0.0

    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII   STUDY AREA HORSE CR.   DATE 19 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	5.3	0.0	.2	21.2	0.0	0.0	1.0
2	4.7	0.0	.2	12.9	0.0	0.0	1.0
3	5.3	0.0	.3	15.1	0.0	0.0	1.0
4	4.9	0.0	.2	14.5	0.0	0.0	1.0
5	4.9	0.0	.2	14.8	0.0	0.0	1.0
6	5.1	0.0	.3	14.5	0.0	0.0	1.0
7	4.9	0.0	.2	17.6	0.0	0.0	1.0
8	5.8	0.0	.3	13.2	0.0	0.0	1.0
9	4.3	0.0	.3	13.5	0.0	0.0	5.0
10	4.9	0.0	.2	17.0	0.0	0.0	2.0
11	5.7	0.0	.2	15.8	0.0	0.0	1.0
12	4.9	0.0	.2	15.6	0.0	0.0	1.0
13	5.4	0.0	.3	18.1	0.0	0.0	1.0
14	4.9	0.0	.3	15.9	0.0	0.0	1.0
15	3.2	0.0	.3	15.8	0.0	0.0	2.0
16	4.8	0.0	.3	17.6	0.0	0.0	1.0
17	5.3	0.0	.3	21.3	0.0	0.0	2.0
18	4.8	0.0	.3	14.1	0.0	0.0	2.0
19	5.3	0.0	.4	14.1	0.0	0.0	1.0
20	5.2	0.0	.3	10.2	0.0	0.0	1.0
MEAN	5.0	0.0	.3	15.6	0.0	0.0	1.4
STD DEV	.5	0.0	.1	2.7	0.0	0.0	.9

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII   STUDY AREA HORSE CR.   DATE 3 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT	
1	5.7	0.0	.4	16.0	0.0	0.0	1.0	
2	5.5	0.0	.4	15.0	0.0	0.0	1.0	
3	5.3	0.0	.4	18.0	0.0	0.0	2.0	
4	5.0	0.0	.3	14.5	0.0	0.0	1.0	BROWNING
5	5.0	0.0	.3	22.6	0.0	0.0	1.0	
6	5.1	0.0	.3	15.0	0.0	0.0	1.0	
7	5.7	0.0	.4	13.5	0.0	0.0	2.0	
8	5.9	0.0	.3	14.0	0.0	0.0	1.0	
9	5.4	0.0	.3	19.5	0.0	0.0	5.0	
10	5.0	0.0	.3	20.5	0.0	0.0	2.0	
11	5.8	0.0	.4	23.0	0.0	0.0	1.0	
12	5.1	0.0	.3	18.3	0.0	0.0	1.0	
13	5.6	0.0	.3	25.8	0.0	0.0	1.0	
14	5.0	0.0	.4	21.4	0.0	0.0	1.0	
15	4.0	0.0	.2	14.5	0.0	0.0	2.0	
16	5.0	0.0	.3	18.7	0.0	0.0	2.0	
17	5.6	0.0	.4	22.0	0.0	0.0	1.0	
18	5.6	0.0	.3	18.0	0.0	0.0	1.0	
19	5.5	0.0	.3	18.2	0.0	0.0	1.0	
20	5.3	0.0	.4	13.0	0.0	0.0	2.0	
MEAN	5.3	0.0	.3	18.1	0.0	0.0	1.5	
STD DEV	.4	0.0	.1	3.6	0.0	0.0	.9	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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 AGROPYRON SMITHII       STUDY AREA  HORSE CR.             DATE 16   JUNE   1981
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           PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
            NO.    STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
                   VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
********************************************************************************************
             1     6.0    0.0      .3     16.7    0.0     0.0    1.0
             2     5.6    0.0      .3     18.0    0.0     0.0    1.0
             3     5.8    0.0      .4     18.9    0.0     0.0    2.0
             4     5.8    0.0      .4     27.3    0.0     0.0    1.0
             5     5.3    0.0      .4     23.1    0.0     0.0    1.0
             6     5.9    0.0      .4     27.0    0.0     0.0    1.0
             7     5.9    0.0      .4     26.1    0.0     0.0    1.0     NEW PLANT
             8     6.0   10.0      .4     22.0   18.0     0.0    1.0
             9     5.9    0.0      .4     20.1    0.0     0.0    5.0
            10     5.9    0.0      .4     22.3    0.0     0.0    2.0
            11     6.0    0.0      .5     24.3    0.0     0.0    1.0
            12     5.6    0.0      .4     15.6    0.0     0.0    1.0
            13     5.6    0.0      .4     28.0    0.0     0.0    1.0
            14     5.3    0.0      .4     23.1    0.0     0.0    1.0
            15     5.3   10.5      .4     27.0   26.1     0.0    2.0
            16     5.4    0.0      .4     21.0    0.0     0.0    1.0
            17     5.9    0.0      .4     22.9    0.0     0.0    1.0
            18     5.9    0.0      .3     18.4    0.0     0.0    1.0
            19     6.0    0.0      .4     18.4    0.0     0.0    1.0
            20     5.3    0.0      .4     15.4    0.0     0.0    2.0


         MEAN      5.7   10.3      .4     21.8   22.1     0.0    1.4

      STD DEV       .3     .4      .0      4.0    5.7     0.0     .9

      0.0 = NOT RECORDED

      MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII STUDY AREA HORSE CR. DATE 29 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.0	0.0	.4	16.5	0.0	0.0	0.0
2	6.0	0.0	.3	17.6	0.0	0.0	0.0
3	6.1	0.0	.3	19.6	0.0	0.0	0.0
4	6.1	0.0	.4	28.5	0.0	0.0	0.0
5	6.0	0.0	.4	24.7	0.0	0.0	0.0
6	6.1	0.0	.4	22.5	0.0	0.0	0.0
7	6.0	0.0	.5	27.5	0.0	0.0	0.0
8	6.1	10.9	.4	26.7	32.5	0.0	0.0
9	6.0	0.0	.4	21.5	0.0	0.0	0.0
10	6.0	0.0	.4	22.5	0.0	0.0	0.0
11	6.0	0.0	.4	24.1	0.0	0.0	0.0
12	6.1	0.0	.3	15.6	0.0	0.0	0.0
13	6.0	0.0	.4	28.3	0.0	0.0	0.0
14	6.0	0.0	.4	23.2	0.0	0.0	0.0
15	6.1	11.2	.4	27.1	36.1	0.0	0.0
16	6.1	0.0	.5	27.0	0.0	0.0	0.0
17	6.1	0.0	.5	23.2	0.0	0.0	0.0
18	5.9	0.0	.3	18.1	0.0	0.0	0.0
19	6.0	0.0	.4	19.3	0.0	0.0	0.0
20	6.0	0.0	.4	23.2	0.0	0.0	0.0
MEAN	6.0	11.1	.4	22.8	34.3	0.0	0.0
STD DEV	.1	.2	.1	4.0	2.5	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA HORSE CR. DATE 14 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.3	0.0	.4	16.3	0.0	0.0	1.0
2	6.1	0.0	.3	15.3	0.0	0.0	2.0
3	6.0	0.0	.3	20.2	0.0	0.0	2.0
4	6.0	0.0	.3	28.4	0.0	0.0	1.0
5	6.2	0.0	.2	24.8	0.0	0.0	2.0
6	6.1	0.0	.4	22.2	0.0	0.0	1.0
7	6.0	0.0	.4	27.4	0.0	0.0	1.0
8	6.3	13.5	.2	27.0	33.0	8.0	1.0
9	6.0	0.0	.4	21.6	0.0	0.0	1.0
10	6.3	0.0	.3	22.1	0.0	0.0	1.0
11	6.1	0.0	.4	28.7	0.0	0.0	1.0
12	6.3	0.0	.3	15.3	0.0	0.0	1.0
13	6.1	0.0	.4	28.5	0.0	0.0	1.0
14	6.0	0.0	.4	23.6	0.0	0.0	1.0
15	6.3	13.5	.4	27.3	37.5	10.0	3.0
16	6.2	0.0	.4	21.4	0.0	0.0	0.0
17	6.1	0.0	.4	22.5	0.0	0.0	0.0
18	6.1	0.0	.2	18.3	0.0	0.0	0.0
19	6.3	0.0	.3	19.5	0.0	0.0	0.0
20	6.5	0.0	.3	21.2	0.0	0.0	0.0
MEAN	6.2	13.5	.3	22.6	35.3	9.0	1.3
STD DEV	.1	0.0	.1	4.4	3.2	1.4	.6

RANDOM REPRO SAMPLE:

PHENO	HGHT	#SPKS
13.0	43.5	11
12.5	39.0	7
13.0	33.0	7
13.0	28.0	6
12.8	35.5	7
12.8	50.5	11
13.0	46.8	9
13.0	31.0	7
13.0	52.0	11
14.0	58.4	10

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII   STUDY AREA HORSE CR.   DATE 28 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.2	0.0	0.0	16.5	0.0	0.0	0.0
2	6.2	0.0	0.0	17.1	0.0	0.0	0.0
3	6.3	0.0	0.0	16.6	0.0	0.0	0.0
4	6.4	0.0	0.0	28.3	0.0	0.0	0.0
5	6.4	0.0	0.0	23.7	0.0	0.0	0.0
6	6.5	0.0	0.0	22.9	0.0	0.0	0.0
7	6.3	0.0	0.0	28.1	0.0	0.0	0.0
8	6.2	15.9	0.0	20.0	33.2	0.0	0.0
9	6.3	0.0	0.0	21.2	0.0	0.0	0.0
10	6.3	0.0	0.0	22.6	0.0	0.0	0.0
11	6.4	0.0	0.0	29.2	0.0	0.0	0.0
12	6.6	0.0	0.0	15.0	0.0	0.0	0.0
13	6.2	0.0	0.0	28.2	0.0	0.0	0.0
14	6.3	0.0	0.0	23.7	0.0	0.0	0.0
15	6.3	15.9	0.0	21.5	34.0	0.0	0.0
16	6.4	0.0	0.0	21.4	0.0	0.0	0.0
17	6.5	0.0	0.0	24.3	0.0	0.0	0.0
18	6.7	0.0	0.0	18.5	0.0	0.0	0.0
19	6.5	0.0	0.0	20.4	0.0	0.0	0.0
20	6.8	0.0	0.0	14.0	0.0	0.0	0.0
MEAN	6.4	15.9	0.0	21.8	33.6	0.0	0.0
STD DEV	.2	0.0	0.0	4.5	.6	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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 AGROPYRON SMITHII       STUDY AREA  HORSE CR.            DATE 11   AUGUST 1981
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        PLANT  PHENOLOGICAL  MAX.   MAX.   MAX.   NOS.   NOS.
         NO.   STAGE  SCORE  LEAF   LEAF   SPIKE  SPK/   VEG.
               VEG.   REPR.  WIDTH  HGHT.  HGHT.  CULM   PLANT
*************************************************************************************
          1    6.3    0.0     .3    16.6    0.0    0.0    0.0
          2    6.3    0.0     .2    16.1    0.0    0.0    0.0
          3    6.4    0.0     .2    17.3    0.0    0.0    0.0
          4    6.5    0.0     .2    28.8    0.0    0.0    0.0
          5    6.5    0.0     .3    23.9    0.0    0.0    0.0
          6    6.5    0.0     .2    23.0    0.0    0.0    0.0
          7    6.3    0.0     .4    28.0    0.0    0.0    0.0
          8    6.5   16.2     .1    21.5   33.3    0.0    0.0
          9    6.4    0.0     .1    21.7    0.0    0.0    0.0
         10    6.3    0.0     .2    20.2    0.0    0.0    0.0       EXTENSIVE USE
         11    6.4    0.0     .2    29.2    0.0    0.0    0.0       BY GRASSHOPPERS
         12    6.6    0.0     .1    15.3    0.0    0.0    0.0
         13    6.3    0.0     .1    28.3    0.0    0.0    0.0
         14    6.4    0.0     .2    23.8    0.0    0.0    0.0
         15    6.3    0.0     .2    14.0   34.5    0.0    0.0
         16    6.4    0.0     .1    20.0    0.0    0.0    0.0
         17    6.5    0.0     .2    23.3    0.0    0.0    0.0
         18    6.7    0.0     .1    18.2    0.0    0.0    0.0
         19    6.8    0.0     .1    17.5    0.0    0.0    0.0
         20    6.8    0.0     .1    13.2    0.0    0.0    0.0

      MEAN     6.5   16.2     .2    21.0   33.9    0.0    0.0

  STD DEV       .2    0.0     .1     5.0     .8    0.0    0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII STUDY AREA HORSE CR. DATE 25 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.5	0.0	.2	17.4	0.0	0.0	0.0
2	6.5	0.0	.2	13.2	0.0	0.0	0.0
3	6.4	0.0	.2	12.2	0.0	0.0	0.0
4	6.5	0.0	.2	28.7	0.0	0.0	0.0
5	6.5	0.0	.2	24.3	0.0	0.0	0.0
6	6.5	0.0	.2	23.2	0.0	0.0	0.0
7	6.4	0.0	.2	26.3	0.0	0.0	0.0
8	6.5	16.6	.2	20.3	33.5	0.0	0.0
9	6.5	0.0	.2	20.8	0.0	0.0	0.0
10	6.5	0.0	.1	20.2	0.0	0.0	0.0
11	6.4	0.0	.2	28.5	0.0	0.0	0.0
12	6.6	0.0	.1	15.8	0.0	0.0	0.0
13	6.4	0.0	.2	23.6	0.0	0.0	0.0
14	6.5	0.0	.2	23.6	0.0	0.0	0.0
15	6.4	16.6	.2	13.6	33.8	0.0	0.0
16	6.4	0.0	.2	20.0	0.0	0.0	0.0
17	6.5	0.0	.2	23.1	0.0	0.0	0.0
18	6.8	0.0	.2	18.1	0.0	0.0	0.0
19	6.8	0.0	.1	18.1	0.0	0.0	0.0
20	6.8	0.0	.1	10.5	0.0	0.0	0.0
MEAN	6.5	16.6	.2	20.1	33.7	0.0	0.0
STD DEV	.1	0.0	.0	5.2	.2	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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AGROPYRON SMITHII      STUDY AREA  HORSE CR.          DATE 12   SEPT   1981
-----------------                  ----------              ----------------

        PLANT   PHENOLOGICAL    MAX.    MAX.    MAX.    NOS.    NOS.
        NO.     STAGE   SCORE   LEAF    LEAF    SPIKE   SPK/    VEG.
                VEG.    REPR.   WIDTH   HGHT.   HGHT.   CULM    PLANT
**********************************************************************
          1     6.8     0.0     0.0     0.0     0.0     0.0     0.0
          2     6.9     0.0     0.0     0.0     0.0     0.0     0.0
          3     6.9     0.0     0.0     0.0     0.0     0.0     0.0
          4     6.9     0.0     0.0     0.0     0.0     0.0     0.0
          5     6.9     0.0     0.0     0.0     0.0     0.0     0.0
          6     6.8     0.0     0.0     0.0     0.0     0.0     0.0
          7     7.1     0.0     0.0     0.0     0.0     0.0     0.0
          8     7.0     0.0     0.0     0.0     0.0     0.0     0.0
          9     6.9     0.0     0.0     0.0     0.0     0.0     0.0
         10     7.0     0.0     0.0     0.0     0.0     0.0     0.0
         11     7.0     0.0     0.0     0.0     0.0     0.0     0.0
         12     7.0     0.0     0.0     0.0     0.0     0.0     0.0
         13     6.9     0.0     0.0     0.0     0.0     0.0     0.0
         14     6.9     0.0     0.0     0.0     0.0     0.0     0.0
         15     7.0     0.0     0.0     0.0     0.0     0.0     0.0
         16     7.0     0.0     0.0     0.0     0.0     0.0     0.0
         17     7.0     0.0     0.0     0.0     0.0     0.0     0.0
         18     6.9     0.0     0.0     0.0     0.0     0.0     0.0
         19     6.8     0.0     0.0     0.0     0.0     0.0     0.0
         20     7.1     0.0     0.0     0.0     0.0     0.0     0.0


     MEAN       6.9     0.0     0.0     0.0     0.0     0.0     0.0

   STD DEV       .1     0.0     0.0     0.0     0.0     0.0     0.0

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII   STUDY AREA MESA ANT   DATE 02 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	3.7	0.0	.1	10.1	0.0	0.0	1.0
2	3.4	0.0	.1	8.0	0.0	0.0	1.0
3	3.3	0.0	.1	6.1	0.0	0.0	1.0
4	3.6	0.0	.1	9.2	0.0	0.0	4.0
5	3.3	0.0	.1	6.6	0.0	0.0	1.0
6	3.4	0.0	.1	6.1	0.0	0.0	1.0
7	4.1	0.0	.1	11.7	0.0	0.0	2.0
8	4.0	0.0	.1	12.1	0.0	0.0	1.0
9	3.8	0.0	.1	12.1	0.0	0.0	2.0
10	3.6	0.0	.1	9.4	0.0	0.0	1.0
11	4.2	0.0	.1	10.1	0.0	0.0	2.0
12	3.7	0.0	.1	10.8	0.0	0.0	1.0
13	3.6	0.0	.1	9.1	0.0	0.0	2.0
14	3.7	0.0	.1	10.7	0.0	0.0	2.0
15	3.6	0.0	.1	9.1	0.0	0.0	2.0
16	3.3	0.0	.1	6.1	0.0	0.0	1.0
17	3.7	0.0	.1	13.4	0.0	0.0	1.0
18	3.5	0.0	.1	10.3	0.0	0.0	3.0
19	3.6	0.0	.1	9.4	0.0	0.0	1.0
20	3.6	0.0	.1	11.9	0.0	0.0	0.0
MEAN	3.6	0.0	.1	9.6	0.0	0.0	1.6
STD DEV	.2	0.0	.0	2.2	0.0	0.0	.8

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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  AGROPYRON SMITHII      STUDY AREA  MESA ANT              DATE 26   MAY    1981
 ---------------------              ----------              -------------------

        PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
         NO.    STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
                VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
****************************************************************************************
          1     4.8    0.0      .2     13.0    0.0     0.0    1.0
          2     3.7    0.0      .2     13.3    0.0     0.0    1.0
          3     4.8    0.0      .1     12.5    0.0     0.0    1.0
          4     4.8    0.0      .2     15.6    0.0     0.0    1.0      NEW PLANT
          5     4.3    0.0      .1      9.8    0.0     0.0    1.0      NEW PLANT
          6     4.9    0.0      .2     16.7    0.0     0.0    2.0      NEW PLANT
          7     4.2    0.0      .1      6.2    0.0     0.0    1.0
          8     4.7    0.0      .2     11.0    0.0     0.0    1.0      NEW PLANT
          9     4.2    0.0      .1     10.1    0.0     0.0    1.0      NEW PLANT
         10     4.8    0.0      .2     12.2    0.0     0.0    1.0      NEW PLANT
         11     4.6    0.0      .2     11.5    0.0     0.0    1.0
         12     5.3    0.0      .2     20.8    0.0     0.0    2.0      NEW PLANT
         13     3.1    0.0      .1      9.1    0.0     0.0    1.0
         14     4.6    0.0      .1     11.8    0.0     0.0    1.0      NEW PLANT
         15     3.2    0.0      .2     15.1    0.0     0.0    2.0      NEW PLANT
         16     4.5    0.0      .1      9.2    0.0     0.0    2.0
         17     4.4    0.0      .2     18.3    0.0     0.0    3.0      NEW PLANT
         18     4.3    0.0      .1     13.4    0.0     0.0    2.0      NEW PLANT
         19     4.7    0.0      .1     12.0    0.0     0.0    1.0      NEW PLANT
         20     4.8    0.0      .2     15.8    0.0     0.0    3.0      NEW PLANT

       MEAN     4.4    0.0      .2     12.9    0.0     0.0    1.5

    STD DEV      .6    0.0      .1      3.4    0.0     0.0     .7

    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII   STUDY AREA MESA ANT   DATE 05 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	4.9	0.0	.3	14.1	0.0	0.0	1.0
2	4.6	0.0	.3	14.9	0.0	0.0	1.0
3	4.9	0.0	.1	13.3	0.0	0.0	1.0
4	4.3	0.0	.3	22.4	0.0	0.0	1.0
5	4.3	0.0	.1	10.1	0.0	0.0	1.0
6	4.9	0.0	.2	19.7	0.0	0.0	2.0
7	4.5	0.0	.1	8.2	0.0	0.0	1.0
8	5.9	0.0	.2	20.1	0.0	0.0	1.0
9	4.3	0.0	.2	13.0	0.0	0.0	1.0
10	5.2	0.0	.2	16.3	0.0	0.0	1.0
11	5.6	0.0	.2	15.2	0.0	0.0	1.0
12	5.7	0.0	.2	21.1	0.0	0.0	2.0
13	3.9	0.0	.2	9.7	0.0	0.0	1.0
14	4.7	0.0	.2	16.2	0.0	0.0	1.0
15	4.2	0.0	.2	17.5	0.0	0.0	2.0
16	4.6	0.0	.2	13.2	0.0	0.0	2.0
17	4.6	0.0	.2	19.1	0.0	0.0	3.0
18	4.7	0.0	.1	13.5	0.0	0.0	2.0
19	4.6	0.0	.1	13.8	0.0	0.0	1.0
20	4.8	0.0	.3	18.5	0.0	0.0	3.0
MEAN	4.8	0.0	.2	15.5	0.0	0.0	1.5
STD DEV	.5	0.0	.1	3.9	0.0	0.0	.7

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
AGROPYRON SMITHII      STUDY AREA  MESA ANT               DATE 16   JUNE   1981
-----------------                  ----------                  ----------------

      PLANT  PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
       NO.   STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
             VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
*************************************************************************************
        1     4.9    0.0     .3     14.8     0.0     0.0    1.0
        2     4.9    0.0     .3     15.2     0.0     0.0    1.0
        3     4.9    0.0     .2     14.0     0.0     0.0    1.0
        4     4.8    0.0     .3     22.9     0.0     0.0    1.0
        5     4.6    0.0     .1     12.0     0.0     0.0    1.0
        6     4.9    0.0     .3     20.3     0.0     0.0    2.0
        7     4.5    0.0     .1      9.1     0.0     0.0    1.0
        8     5.9    0.0     .3     20.4     0.0     0.0    1.0
        9     4.5    0.0     .2     13.4     0.0     0.0    1.0
       10     5.2    0.0     .2     16.5     0.0     0.0    1.0
       11     5.6    0.0     .2     15.3     0.0     0.0    1.0
       12     5.7    0.0     .2     22.6     0.0     0.0    2.0
       13     3.9    0.0     .2     11.0     0.0     0.0    1.0
       14     4.8    0.0     .2     16.8     0.0     0.0    1.0
       15     4.5    0.0     .2     18.0     0.0     0.0    2.0
       16     4.8    0.0     .2     13.4     0.0     0.0    2.0
       17     4.8    0.0     .2     19.5     0.0     0.0    3.0
       18     4.8    0.0     .1     13.6     0.0     0.0    1.0
       19     4.6    0.0     .1     14.2     0.0     0.0    1.0
       20     4.9   10.1     .3     22.7    21.2     0.0    3.0
*************************************************************************************
    MEAN      4.9   10.1     .2     16.3    21.2     0.0    1.4

 STD DEV       .5    0.0     .1      4.0     0.0     0.0     .7

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII     STUDY AREA  MESA ANT              DATE 30    JUNE    1981
--------------------              ----------                ------------------


       PLANT   PHENOLOGICAL    MAX.     MAX.     MAX.     NOS.    NOS.
        NO.    STAGE   SCORE   LEAF     LEAF     SPIKE    SPK/    VEG.
               VEG.    REPR.   WIDTH    HGHT.    HGHT.    CULM    PLANT
*****************************************************************************
         1      5.7     0.0     .2      12.0     0.0      0.0     0.0
         2      5.5     0.0     .2      14.8     0.0      0.0     0.0
         3      5.6     0.0     .2      13.6     0.0      0.0     0.0
         4      5.6     0.0     .3      22.5     0.0      0.0     0.0
         5      5.7     0.0     .2      12.3     0.0      0.0     0.0
         6      5.7     0.0     .3      19.7     0.0      0.0     0.0
         7      5.8     0.0     .2       8.1     0.0      0.0     0.0
         8      5.5     0.0     .3      20.0     0.0      0.0     0.0
         9      5.6     0.0     .2      13.0     0.0      0.0     0.0
        10      5.5     0.0     .2      16.8     0.0      0.0     0.0   NEW PLANT
        11      5.6     0.0     .2      15.1     0.0      0.0     0.0
        12      5.8     0.0     .2      11.2     0.0      0.0     0.0
        13      5.5     0.0     .3      20.1     0.0      0.0     0.0   NEW PLANT
        14      5.6     0.0     .2      17.0     0.0      0.0     0.0
        15      5.7     0.0     .3      16.8     0.0      0.0     0.0
        16      5.7     0.0     .2      12.6     0.0      0.0     0.0
        17      6.0     0.0     .2      16.2     0.0      0.0     0.0
        18      5.8     0.0     .1      13.2     0.0      0.0     0.0
        19      5.7     0.0     .2      14.1     0.0      0.0     0.0
        20      5.8    10.5     .3      25.6     0.0      0.0     0.0   NEW PLANT


      MEAN      5.7    10.5     .2      15.7     0.0      0.0     0.0

   STD DEV       .1     0.0     .1       4.2     0.0      0.0     0.0

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
```

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  AGROPYRON SMITHII     STUDY AREA  MESA ANT           DATE 14    JULY   1981
 ----------------------            ----------                ------------------


        PLANT  PHENOLOGICAL    MAX.    MAX.    MAX.    NOS.   NOS.
         NO.   STAGE   SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
               VEG.    REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
****************************************************************************************
          1     6.2     0.0     0.0    10.0     0.0     0.0     0.0
          2     6.3     0.0     0.0    13.0     0.0     0.0     0.0
          3     6.9     0.0     0.0    12.0     0.0     0.0     0.0
          4     6.3     0.0     0.0    22.0     0.0     0.0     0.0
          5     6.2     0.0     0.0    12.0     0.0     0.0     0.0
          6     6.5     0.0     0.0    20.0     0.0     0.0     0.0
          7     6.3     0.0     0.0    10.0     0.0     0.0     0.0
          8     6.3     0.0     0.0    14.0     0.0     0.0     0.0       NEW PLANT
          9     6.4     0.0     0.0    11.0     0.0     0.0     0.0
         10     6.3     0.0     0.0    14.5     0.0     0.0     0.0       NEW PLANT
         11     6.3     0.0     0.0    15.0     0.0     0.0     0.0       NEW PLANT
         12     6.4     0.0     0.0    11.5     0.0     0.0     0.0       NEW PLANT
         13     6.3     0.0     0.0    10.5     0.0     0.0     0.0
         14     6.1     0.0     0.0    23.5     0.0     0.0     0.0
         15     6.2     0.0     0.0    17.5     0.0     0.0     0.0
         16     6.1     0.0     0.0    13.5     0.0     0.0     0.0
         17     6.4     0.0     0.0     9.0     0.0     0.0     0.0
         18     6.3     0.0     0.0    15.5     0.0     0.0     0.0
         19     6.4     0.0     0.0    17.5     0.0     0.0     0.0
         20     6.3    16.1     0.0    17.0    25.5     1.0     1.0       NEW PLANT


      MEAN      6.3    16.1     0.0    14.5    25.5     1.0     1.0

   STD DEV       .2     0.0     0.0     4.1     0.0     0.0     0.0

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII STUDY AREA MESA ANT DATE 28 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.3	0.0	.1	9.6	0.0	0.0	0.0
2	6.2	0.0	.1	15.0	0.0	0.0	0.0
3	6.4	0.0	.1	10.4	0.0	0.0	0.0
4	6.0	0.0	.1	20.6	0.0	0.0	0.0
5	6.4	0.0	.1	9.5	0.0	0.0	0.0
6	6.3	0.0	.1	19.6	0.0	0.0	0.0
7	6.5	0.0	.1	8.0	0.0	0.0	0.0
8	6.2	0.0	.1	25.8	0.0	0.0	0.0
9	6.1	0.0	.1	13.6	0.0	0.0	0.0
10	6.3	0.0	.1	15.8	0.0	0.0	0.0
11	6.5	0.0	.1	15.4	0.0	0.0	0.0
12	6.4	0.0	.1	11.5	0.0	0.0	0.0
13	6.5	0.0	.1	11.2	0.0	0.0	0.0
14	6.1	0.0	.2	29.2	0.0	0.0	0.0
15	6.3	0.0	.1	17.5	0.0	0.0	0.0
16	6.3	0.0	.1	12.9	0.0	0.0	0.0
17	6.5	0.0	.1	16.5	0.0	0.0	0.0
18	6.2	0.0	.1	13.3	0.0	0.0	0.0
19	6.2	0.0	.1	11.5	0.0	0.0	0.0
20	6.2	0.0	.1	17.0	25.0	0.0	0.0
MEAN	6.3	0.0	.1	15.2	25.0	0.0	0.0
STD DEV	.1	0.0	.0	5.4	0.0	0.0	0.0

REPRO CULMS VERY SPARSE
CLIPPED A SINGLE HEAD
LF. HT 17.0
SPK HT 32.0
LF. WD. .1
VEG PHENO 6.5
REPRO PHENO 16.3

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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  AGROPYRON SMITHII     STUDY AREA  MESA ANT            DATE 11   AUGUST 1981
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            PLANT  PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
             NO.   STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
                   VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
*******************************************************************************************
               1    6.5    0.0     .1      9.0    0.0     0.0     1.0
               2    6.5    0.0     .1     14.9    0.0     0.0     1.0
               3    6.6    0.0     .1     16.3    0.0     0.0     1.0
               4    6.3    0.0     .2     21.4    0.0     0.0     1.0
               5    6.5    0.0     .1     12.1    0.0     0.0     1.0
               6    6.4    0.0     .1     20.3    0.0     0.0     2.0
               7    6.5    0.0     .1      8.4    0.0     0.0     1.0
               8    6.4    0.0     .2     17.3    0.0     0.0     1.0
               9    6.4    0.0     .1     12.1    0.0     0.0     1.0
              10    6.5    0.0     .1     14.2    0.0     0.0     1.0
              11    6.5    0.0     .1     14.5    0.0     0.0     1.0
              12    6.5    0.0     .1     11.7    0.0     0.0     1.0
              13    6.4    0.0     .2     18.1    0.0     0.0     1.0
              14    6.3    0.0     .2     26.5    0.0     0.0     1.0
              15    6.5    0.0     .1     17.5    0.0     0.0     1.0
              16    6.5    0.0     .1     12.3    0.0     0.0     2.0
              17    6.6    0.0     .1     16.7    0.0     0.0     1.0
              18    6.5    0.0     .1     14.0    0.0     0.0     2.0
              19    6.4    0.0     .1     13.2    0.0     0.0     1.0
              20    6.4   16.5     .2     19.3   25.8     0.0     1.0

          MEAN      6.5   16.5     .1     15.5   25.8     0.0     1.2

       STD DEV       .1    0.0     .0      4.4    0.0     0.0      .4

       0.0 = NOT RECORDED

       MEASUREMENTS IN CENTIMETERS
  AGROPYRON SMITHII      STUDY AREA  MESA ANT            DATE 24    AUGUST 1981
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      PLANT   PHENOLOGICAL    MAX.     MAX.     MAX.     NOS.    NOS.
       NO.    STAGE   SCORE   LEAF     LEAF     SPIKE    SPK/    VEG.
              VEG.    REPR.   WIDTH    HGHT.    HGHT.    CULM    PLANT
******************************************************************************
        1     6.9     0.0      .1      16.0     0.0      0.0     0.0    NEW PLANT
        2     6.7     0.0      .1      15.0     0.0      0.0     0.0
        3     6.8     0.0      .1      12.3     0.0      0.0     0.0
        4     6.2     0.0      .1      22.0     0.0      0.0     0.0
        5     6.8     0.0      .1      11.8     0.0      0.0     0.0
        6     6.5     0.0      .1      16.5     0.0      0.0     0.0
        7     6.8     0.0      .1       7.3     0.0      0.0     0.0
        8     6.6     0.0      .1      16.5     0.0      0.0     0.0
        9     6.8     0.0      .1      11.2     0.0      0.0     0.0
       10     6.5     0.0      .1      15.0     0.0      0.0     0.0
       11     6.6     0.0      .1      15.4     0.0      0.0     0.0
       12     6.6     0.0      .1      11.0     0.0      0.0     0.0
       13     6.9     0.0      .1      13.0     0.0      0.0     0.0
       14     6.4     0.0      .1      26.0     0.0      0.0     0.0
       15     6.7     0.0      .1      17.5     0.0      0.0     0.0
       16     6.8     0.0      .1      12.5     0.0      0.0     0.0
       17     6.9     0.0      .1       9.4     0.0      0.0     0.0
       18     6.5     0.0      .1      13.5     0.0      0.0     0.0
       19     6.6     0.0      .1      13.5     0.0      0.0     0.0
       20     6.8    16.9      .1      14.5    25.5      0.0     0.0


    MEAN      6.7    16.9      .1      14.5    25.5      0.0     0.0

  STD DEV      .2     0.0      .0       4.2     0.0      0.0     0.0


  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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   AGROPYRON SMITHII     STUDY AREA  MESA ANT            DATE 12   SEPT   1981
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          PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
           NO.    STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
                  VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
****************************************************************************
            1     6.9    0.0     0.0     13.1    0.0     0.0     0.0
            2     6.8    0.0     0.0     17.0    0.0     0.0     0.0
            3     6.9    0.0     0.0     13.4    0.0     0.0     0.0
            4     6.8    0.0     0.0     21.2    0.0     0.0     0.0
            5     6.9    0.0     0.0     10.5    0.0     0.0     0.0
            6     7.0    0.0     0.0     21.0    0.0     0.0     0.0
            7     6.9    0.0     0.0     16.1    0.0     0.0     0.0
            8     6.9    0.0     0.0     15.1    0.0     0.0     0.0
            9     6.9    0.0     0.0     10.4    0.0     0.0     0.0
           10     6.8    0.0     0.0     12.1    0.0     0.0     0.0
           11     6.7    0.0     0.0     18.6    0.0     0.0     0.0
           12     6.9    0.0     0.0     11.4    0.0     0.0     0.0
           13     6.9    0.0     0.0     15.4    0.0     0.0     0.0
           14     6.9    0.0     0.0     16.6    0.0     0.0     0.0
           15     6.9    0.0     0.0     11.5    0.0     0.0     0.0
           16     6.9    0.0     0.0     13.4    0.0     0.0     0.0
           17     6.9    0.0     0.0     11.0    0.0     0.0     0.0
           18     6.9    0.0     0.0     14.6    0.0     0.0     0.0
           19     6.9    0.0     0.0     17.1    0.0     0.0     0.0
           20     6.7    0.0     0.0     20.5    0.0     0.0     0.0

       MEAN       6.9    0.0     0.0     15.0    0.0     0.0     0.0

    STD DEV        .1    0.0     0.0      3.5    0.0     0.0     0.0

    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII      STUDY AREA  OWL DRAW              DATE  2   MAY    1981
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       PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.     NOS.    NOS.
        NO.    STAGE  SCORE   LEAF    LEAF    SPIKE    SPK/    VEG.
               VEG.   REPR.   WIDTH   HGHT.   HGHT.    CULM    PLANT
*****************************************************************************
         1     4.4    0.0     0.0     10.6    0.0      0.0     0.0
         2     3.9    0.0     0.0      7.3    0.0      0.0     0.0
         3     3.1    0.0     0.0      5.4    0.0      0.0     0.0
         4     4.3    0.0     0.0     13.7    0.0      0.0     0.0
         5     3.8    0.0     0.0      9.1    0.0      0.0     0.0
         6     4.2    0.0     0.0     12.3    0.0      0.0     0.0
         7     4.3    0.0     0.0      5.5    0.0      0.0     0.0
         8     3.8    0.0     0.0     11.6    0.0      0.0     0.0
         9     4.2    0.0     0.0     10.4    0.0      0.0     0.0
        10     4.9    0.0     0.0     13.7    0.0      0.0     0.0
        11     3.7    0.0     0.0     11.1    0.0      0.0     0.0
        12     4.2    0.0     0.0      9.3    0.0      0.0     0.0
        13     4.2    0.0     0.0     11.7    0.0      0.0     0.0
        14     3.6    0.0     0.0     10.2    0.0      0.0     0.0
        15     3.6    0.0     0.0      9.2    0.0      0.0     0.0
        16     4.3    0.0     0.0      7.1    0.0      0.0     0.0
        17     4.7    0.0     0.0      9.7    0.0      0.0     0.0
        18     4.0    0.0     0.0     11.3    0.0      0.0     0.0
        19     4.8    0.0     0.0     11.0    0.0      0.0     0.0
        20     4.2    0.0     0.0      9.0    0.0      0.0     0.0


      MEAN     4.1    0.0     0.0     10.0    0.0      0.0     0.0

    STD DEV     .4    0.0     0.0      2.3    0.0      0.0     0.0


    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII STUDY AREA OWL DRAW DATE 25 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	4.9	0.0	.2	12.0	0.0	0.0	1.0
2	4.0	0.0	.2	10.1	0.0	0.0	1.0
3	4.0	0.0	.3	26.0	0.0	0.0	3.0
4	4.4	0.0	.3	19.0	0.0	0.0	1.0
5	4.0	0.0	.3	14.8	0.0	0.0	2.0
6	4.8	0.0	.3	15.5	0.0	0.0	2.0
7	4.9	0.0	.3	13.0	0.0	0.0	1.0
8	4.0	0.0	.2	11.0	0.0	0.0	1.0
9	4.5	0.0	.2	15.2	0.0	0.0	1.0
10	5.1	0.0	.2	16.0	0.0	0.0	2.0
11	4.2	0.0	.2	17.1	0.0	0.0	1.0
12	4.4	0.0	.3	13.4	0.0	0.0	2.0
13	4.6	0.0	.3	16.9	0.0	0.0	1.0
14	4.1	0.0	.3	14.4	0.0	0.0	2.0
15	3.9	0.0	.2	13.6	0.0	0.0	1.0
16	4.5	0.0	.2	10.5	0.0	0.0	1.0
17	5.0	0.0	.3	24.5	0.0	0.0	1.0
18	4.3	0.0	.3	14.3	0.0	0.0	1.0
19	4.9	0.0	.3	15.5	0.0	0.0	1.0
20	4.3	0.0	.3	13.8	0.0	0.0	1.0
MEAN	4.4	0.0	.3	15.3	0.0	0.0	1.4
STD DEV	.4	0.0	.1	4.1	0.0	0.0	.6

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII   STUDY AREA OWL DRAW   DATE 8 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	5.0	0.0	.2	10.9	0.0	0.0	2.0
2	4.3	0.0	.2	9.5	0.0	0.0	1.0
3	5.8	0.0	.3	23.0	0.0	0.0	2.0
4	5.8	0.0	.3	18.1	0.0	0.0	1.0
5	4.3	0.0	.2	14.8	0.0	0.0	1.0
6	5.7	0.0	.3	16.5	0.0	0.0	2.0
7	5.2	0.0	.2	13.0	0.0	0.0	1.0
8	4.0	0.0	.3	22.0	0.0	0.0	2.0
9	5.5	0.0	.3	15.0	0.0	0.0	1.0
10	5.9	0.0	.3	19.0	0.0	0.0	1.0
11	5.4	0.0	.3	15.2	0.0	0.0	1.0
12	5.5	0.0	.4	16.4	0.0	0.0	1.0
13	4.7	0.0	.2	10.2	0.0	0.0	1.0
14	5.3	0.0	.3	15.0	0.0	0.0	2.0
15	5.4	0.0	.3	16.2	0.0	0.0	1.0
16	5.8	0.0	.2	10.0	0.0	0.0	1.0
17	5.1	0.0	.2	23.2	0.0	0.0	1.0
18	5.3	0.0	.3	15.2	0.0	0.0	1.0
19	4.9	0.0	.4	15.7	0.0	0.0	2.0
20	4.9	0.0	.3	12.4	0.0	0.0	1.0
MEAN	5.2	0.0	.3	15.6	0.0	0.0	1.3
STD DEV	.5	0.0	.1	4.0	0.0	0.0	.5

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII   STUDY AREA OWL DRAW   DATE 15 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT	
1	5.0	0.0	.2	11.0	0.0	0.0	1.0	NEW PLANT
2	5.0	0.0	.2	12.2	0.0	0.0	1.0	NEW PLANT
3	5.6	0.0	.5	24.0	0.0	0.0	2.0	
4	5.8	0.0	.4	18.6	0.0	0.0	1.0	
5	5.9	0.0	.4	14.7	0.0	0.0	2.0	
6	5.8	0.0	.4	17.2	0.0	0.0	2.0	
7	5.5	0.0	.3	13.4	0.0	0.0	1.0	
8	5.0	0.0	.3	13.4	0.0	0.0	1.0	
9	5.3	0.0	.3	16.0	0.0	0.0	1.0	
10	5.9	0.0	.4	19.0	0.0	0.0	1.0	
11	5.5	0.0	.3	16.0	0.0	0.0	1.0	
12	5.5	0.0	.4	14.5	0.0	0.0	2.0	
13	5.5	0.0	.3	11.2	0.0	0.0	1.0	
14	5.5	0.0	.4	16.0	0.0	0.0	2.0	
15	5.5	0.0	.3	12.0	0.0	0.0	1.0	
16	5.9	0.0	.3	12.0	0.0	0.0	1.0	
17	5.4	0.0	.4	24.2	0.0	0.0	1.0	
18	5.6	0.0	.4	14.6	0.0	0.0	1.0	
19	5.5	0.0	.4	16.5	0.0	0.0	1.0	
20	5.9	0.0	.4	13.9	0.0	0.0	1.0	
MEAN	5.5	0.0	.4	15.5	0.0	0.0	1.3	
STD DEV	.3	0.0	.1	3.7	0.0	0.0	.4	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA OWL DRAW DATE 28 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT	
1	5.6	0.0	0.0	9.4	0.0	0.0	0.0	
2	5.8	0.0	0.0	12.8	0.0	0.0	0.0	
3	6.1	0.0	0.0	24.0	0.0	0.0	0.0	
4	6.0	0.0	0.0	13.6	0.0	0.0	0.0	
5	6.2	0.0	0.0	15.1	0.0	0.0	0.0	
6	6.0	0.0	0.0	17.6	0.0	0.0	0.0	
7	5.9	0.0	0.0	13.0	0.0	0.0	0.0	
8	6.0	0.0	0.0	20.5	0.0	0.0	0.0	
9	6.0	0.0	0.0	15.7	0.0	0.0	0.0	
10	5.9	0.0	0.0	13.3	0.0	0.0	0.0	
11	6.0	0.0	0.0	18.1	0.0	0.0	0.0	
12	5.9	0.0	0.0	15.5	0.0	0.0	0.0	
13	5.8	0.0	0.0	14.5	0.0	0.0	0.0	NEW PLANT
14	5.9	0.0	0.0	15.7	0.0	0.0	0.0	
15	6.0	0.0	0.0	11.0	0.0	0.0	0.0	
16	5.9	0.0	0.0	17.6	0.0	0.0	0.0	
17	5.9	0.0	0.0	20.0	0.0	0.0	0.0	
18	5.8	0.0	0.0	15.0	0.0	0.0	0.0	
19	6.1	0.0	0.0	17.4	0.0	0.0	0.0	
20	5.9	0.0	0.0	14.5	0.0	0.0	0.0	
MEAN	5.9	0.0	0.0	15.7	0.0	0.0	0.0	
STD DEV	.1	0.0	0.0	3.4	0.0	0.0	0.0	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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  AGROPYRON SMITHII     STUDY AREA  OWL DRAW              DATE 13   JULY   1981
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        PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
         NO.    STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
                VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
*************************************************************************************
           1    6.1    0.0      .3     11.3    0.0     0.0    0.0
           2    6.0    0.0      .2     12.6    0.0     0.0    0.0     SEED STALKS SPARSE
           3    6.2    0.0      .3     23.0    0.0     0.0    0.0     IN AGSM POPULATION
           4    5.8    0.0      .3     15.0    0.0     0.0    0.0
           5    6.0    0.0      .3     14.8    0.0     0.0    0.0
           6    5.8    0.0      .2     17.6    0.0     0.0    0.0
           7    5.7    0.0      .3     13.7    0.0     0.0    0.0
           8    5.7    0.0      .2     12.4    0.0     0.0    0.0
           9    6.0    0.0      .2     13.5    0.0     0.0    0.0
          10    6.1    0.0      .2     13.8    0.0     0.0    0.0
          11    5.8    0.0      .2     13.7    0.0     0.0    0.0
          12    6.1    0.0      .4     14.6    0.0     0.0    0.0
          13    6.0    0.0      .3     14.6    0.0     0.0    0.0
          14    6.2    0.0      .3     15.7    0.0     0.0    0.0
          15    6.3    0.0      .2     11.0    0.0     0.0    0.0
          16    6.1    0.0      .3     11.1    0.0     0.0    0.0
          17    6.3    0.0      .3     19.6    0.0     0.0    0.0
          18    6.1    0.0      .3     14.1    0.0     0.0    0.0
          19    6.3    0.0      .3     14.9    0.0     0.0    0.0
          20    6.3    0.0      .2     14.2    0.0     0.0    0.0


      MEAN      6.0    0.0      .3     14.6    0.0     0.0    0.0

    STD DEV      .2    0.0      .1      2.9    0.0     0.0    0.0


    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII STUDY AREA OWL DRAW DATE 27 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	5.6	0.0	.2	11.4	0.0	0.0	1.0
2	5.9	0.0	.2	12.9	0.0	0.0	1.0
3	6.0	0.0	.3	23.6	0.0	0.0	2.0
4	6.0	0.0	.2	16.6	0.0	0.0	1.0
5	6.1	0.0	.2	15.2	0.0	0.0	1.0
6	6.0	0.0	.2	17.9	0.0	0.0	2.0
7	5.9	0.0	.2	13.9	0.0	0.0	1.0
8	6.0	0.0	.1	13.8	0.0	0.0	1.0
9	6.5	0.0	.2	15.3	0.0	0.0	1.0
10	5.9	0.0	.1	17.1	0.0	0.0	1.0
11	6.0	0.0	.2	17.2	0.0	0.0	2.0
12	5.9	0.0	.2	14.7	0.0	0.0	2.0
13	5.8	0.0	.2	14.8	0.0	0.0	2.0
14	5.9	0.0	.2	15.8	0.0	0.0	1.0
15	6.1	0.0	.2	11.0	0.0	0.0	1.0
16	6.0	0.0	.1	13.6	0.0	0.0	1.0
17	6.0	0.0	.1	18.3	0.0	0.0	1.0
18	5.8	0.0	.2	15.0	0.0	0.0	1.0
19	6.1	0.0	.2	19.0	0.0	0.0	2.0
20	6.0	0.0	.1	14.4	0.0	0.0	3.0
MEAN	6.0	0.0	.2	15.6	0.0	0.0	1.4
STD DEV	.2	0.0	.1	2.8	0.0	0.0	.6

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA OWL DRAW DATE 10 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.2	0.0	0.0	10.0	0.0	0.0	0.0
2	6.3	0.0	0.0	13.0	0.0	0.0	0.0
3	6.0	0.0	0.0	24.0	0.0	0.0	0.0
4	6.0	0.0	0.0	16.0	0.0	0.0	0.0
5	6.1	0.0	0.0	15.0	0.0	0.0	0.0
6	6.1	0.0	0.0	18.0	0.0	0.0	0.0
7	6.1	0.0	0.0	13.0	0.0	0.0	0.0
8	6.1	0.0	0.0	18.0	0.0	0.0	0.0
9	6.9	0.0	0.0	6.0	0.0	0.0	0.0
10	6.4	0.0	0.0	15.5	0.0	0.0	0.0
11	6.3	0.0	0.0	17.0	0.0	0.0	0.0
12	6.2	0.0	0.0	15.0	0.0	0.0	0.0
13	6.1	0.0	0.0	14.5	0.0	0.0	0.0
14	6.1	0.0	0.0	16.5	0.0	0.0	0.0
15	6.9	0.0	0.0	9.5	0.0	0.0	0.0
16	6.9	0.0	0.0	6.0	0.0	0.0	0.0
17	6.2	0.0	0.0	13.0	0.0	0.0	0.0
18	6.3	0.0	0.0	15.0	0.0	0.0	0.0
19	6.2	0.0	0.0	19.5	0.0	0.0	0.0
20	6.2	0.0	0.0	15.0	0.0	0.0	0.0
MEAN	6.3	0.0	0.0	14.5	0.0	0.0	0.0
STD DEV	.3	0.0	0.0	4.3	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA OWL DRAW DATE 24 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.4	0.0	.2	10.1	0.0	0.0	0.0
2	6.3	0.0	.2	13.2	0.0	0.0	0.0
3	6.2	0.0	.2	23.3	0.0	0.0	0.0
4	6.3	0.0	.2	19.8	0.0	0.0	0.0
5	6.4	0.0	.2	15.0	0.0	0.0	0.0
6	6.4	0.0	.2	18.0	0.0	0.0	0.0
7	6.4	0.0	.2	12.9	0.0	0.0	0.0
8	6.3	0.0	.2	13.4	0.0	0.0	0.0
9	6.6	0.0	.2	16.9	0.0	0.0	0.0
10	6.4	0.0	.2	17.1	0.0	0.0	0.0
11	6.6	0.0	.2	18.6	0.0	0.0	0.0
12	6.5	0.0	.2	15.2	0.0	0.0	0.0
13	6.4	0.0	.2	19.1	0.0	0.0	0.0
14	6.4	0.0	.2	17.9	0.0	0.0	0.0
15	6.5	0.0	.2	11.9	0.0	0.0	0.0
16	6.6	0.0	.2	13.6	0.0	0.0	0.0
17	6.5	0.0	.2	21.2	0.0	0.0	0.0
18	6.5	0.0	.2	14.2	0.0	0.0	0.0
19	6.4	0.0	.2	19.1	0.0	0.0	0.0
20	6.4	0.0	.2	15.3	0.0	0.0	0.0
MEAN	6.4	0.0	.2	16.3	0.0	0.0	0.0
STD DEV	.1	0.0	.0	3.4	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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  AGROPYRON SMITHII     STUDY AREA  OWL DRAW           DATE 11   SEPT   1981
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        PLANT  PHENOLOGICAL  MAX.    MAX.    MAX.    NOS.   NOS.
         NO.   STAGE  SCORE  LEAF    LEAF    SPIKE   SPK/   VEG.
               VEG.   REPR.  WIDTH   HGHT.   HGHT.   CULM   PLANT
*******************************************************************************
           1   6.7   18.0    0.0     0.0     0.0     0.0     0.0
           2   6.8   18.0    0.0     0.0     0.0     0.0     0.0
           3   6.9    0.0    0.0     0.0     0.0     0.0     0.0
           4   6.7    0.0    0.0     0.0     0.0     0.0     0.0
           5   6.8    0.0    0.0     0.0     0.0     0.0     0.0
           6   6.8    0.0    0.0     0.0     0.0     0.0     0.0
           7   6.9    0.0    0.0     0.0     0.0     0.0     0.0
           8   6.9    0.0    0.0     0.0     0.0     0.0     0.0
           9   6.8    0.0    0.0     0.0     0.0     0.0     0.0
          10   6.7    0.0    0.0     0.0     0.0     0.0     0.0
          11   6.9    0.0    0.0     0.0     0.0     0.0     0.0
          12   6.9    0.0    0.0     0.0     0.0     0.0     0.0
          13   6.8    0.0    0.0     0.0     0.0     0.0     0.0
          14   6.9    0.0    0.0     0.0     0.0     0.0     0.0
          15   6.8    0.0    0.0     0.0     0.0     0.0     0.0
          16   6.8    0.0    0.0     0.0     0.0     0.0     0.0
          17   6.9    0.0    0.0     0.0     0.0     0.0     0.0
          18   6.9    0.0    0.0     0.0     0.0     0.0     0.0
          19   6.9    0.0    0.0     0.0     0.0     0.0     0.0
          20   6.8    0.0    0.0     0.0     0.0     0.0     0.0


      MEAN     6.8   18.0    0.0     0.0     0.0     0.0     0.0

   STD DEV      .1    0.0    0.0     0.0     0.0     0.0     0.0

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII   STUDY AREA RED WASH 2   DATE 01 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	3.9	0.0	.1	12.3	0.0	0.0	1.0
2	4.1	0.0	.2	12.7	0.0	0.0	5.0
3	3.8	0.0	.1	11.1	0.0	0.0	1.0
4	3.7	0.0	.1	4.3	0.0	0.0	1.0
5	4.1	0.0	.2	13.7	0.0	0.0	6.0
6	3.9	0.0	.2	11.9	0.0	0.0	1.0
7	3.9	0.0	.2	15.0	0.0	0.0	5.0
8	3.9	0.0	.1	9.8	0.0	0.0	2.0
9	4.3	0.0	.2	12.2	0.0	0.0	4.0
10	4.4	0.0	.2	12.7	0.0	0.0	2.0
11	3.8	0.0	.1	9.6	0.0	0.0	2.0
12	4.0	0.0	.2	15.6	0.0	0.0	3.0
13	4.1	0.0	.1	8.7	0.0	0.0	6.0
14	3.9	0.0	.1	11.5	0.0	0.0	4.0
15	4.2	0.0	.2	7.8	0.0	0.0	1.0
16	3.9	0.0	.1	9.6	0.0	0.0	1.0
17	3.9	0.0	.1	8.4	0.0	0.0	8.0
18	4.0	0.0	.2	11.9	0.0	0.0	2.0
19	4.2	0.0	.2	11.4	0.0	0.0	4.0
20	4.3	0.0	.2	15.0	0.0	0.0	3.0
MEAN	4.0	0.0	.2	11.3	0.0	0.0	3.1
STD DEV	.2	0.0	.1	2.7	0.0	0.0	2.1

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA RED WASH 2 DATE 04 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	3.1	0.0	.1	16.1	0.0	0.0	0.0
2	4.5	0.0	.2	19.0	0.0	0.0	0.0
3	3.5	0.0	.3	21.0	0.0	0.0	0.0
4	3.4	0.0	.2	15.4	0.0	0.0	0.0
5	4.2	0.0	.2	12.3	0.0	0.0	0.0
6	4.2	0.0	.3	23.4	0.0	0.0	0.0
7	3.0	0.0	.1	17.7	0.0	0.0	0.0
8	4.6	0.0	.2	12.2	0.0	0.0	0.0
9	4.7	0.0	.2	21.2	0.0	0.0	0.0
10	3.6	0.0	.1	15.3	0.0	0.0	0.0
11	3.8	0.0	.2	12.4	0.0	0.0	0.0
12	3.5	0.0	.2	21.4	0.0	0.0	0.0
13	4.4	0.0	.1	10.1	0.0	0.0	0.0
14	5.2	0.0	.1	9.1	0.0	0.0	0.0
15	4.3	0.0	.1	10.3	0.0	0.0	0.0
16	4.5	0.0	.2	8.7	0.0	0.0	0.0
17	4.4	0.0	.2	14.1	0.0	0.0	0.0
18	3.8	0.0	.2	21.3	0.0	0.0	0.0
19	4.2	0.0	.2	16.4	0.0	0.0	0.0
20	3.6	0.0	.2	11.2	0.0	0.0	0.0
MEAN	4.0	0.0	.2	15.4	0.0	0.0	0.0
STD DEV	.6	0.0	.1	4.6	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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AGROPYRON SMITHII    STUDY AREA RED WASH 2           DATE 15   JUNE   1981
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     PLANT   PHENOLOGICAL    MAX.     MAX.     MAX.     NOS.    NOS.
      NO.    STAGE  SCORE    LEAF     LEAF     SPIKE    SPK/    VEG.
             VEG.   REPR.    WIDTH    HGHT.    HGHT.    CULM    PLANT
*****************************************************************************************************
        1    3.6    0.0      .1      16.5      0.0      0.0     1.0
        2    4.6    0.0      .2      26.2      0.0      0.0     3.0
        3    4.5    0.0      .3      27.4      0.0      0.0     1.0
        4    4.4    0.0      .2      16.0      0.0      0.0     1.0
        5    4.6    0.0      .2      15.9      0.0      0.0     1.0
        6    4.6    0.0      .3      25.1      0.0      0.0     8.0
        7    4.3    0.0      .1      18.2      0.0      0.0     1.0
        8    5.2    0.0      .2      15.0      0.0      0.0     1.0
        9    5.4    0.0      .3      22.1      0.0      0.0     2.0
       10    3.9    9.0      .2      16.2     19.8      0.0     4.0
       11    4.3    0.0      .2      24.5      0.0      0.0     3.0
       12    3.7    0.0      .2      11.0      0.0      0.0     1.0
       13    4.4    0.0      .2      16.6      0.0      0.0     1.0
       14    5.4    0.0      .2      17.6      0.0      0.0     2.0
       15    4.7    0.0      .1       9.1      0.0      0.0     3.0
       16    5.4    0.0      .2      14.8      0.0      0.0     1.0
       17    5.6    0.0      .2      21.7      0.0      0.0     2.0
       18    4.3    0.0      .2      13.5      0.0      0.0     1.0
       19    5.3    0.0      .3      16.6      0.0      0.0     1.0
       20    3.9    0.0      .2      12.4      0.0      0.0     2.0


     MEAN    4.6    9.0      .2      17.8     19.8      0.0     2.0

  STD DEV     .6    0.0      .1       5.1      0.0      0.0     1.7

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII STUDY AREA RED WASH 2 DATE 29 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	4.7	9.0	.2	25.3	0.0	0.0	0.0
2	4.8	9.0	.2	24.5	0.0	0.0	0.0
3	5.5	9.0	.2	29.1	0.0	0.0	0.0
4	4.6	9.0	.2	14.8	0.0	0.0	0.0
5	4.6	9.0	.2	12.9	0.0	0.0	0.0
6	5.5	9.0	.2	25.5	0.0	0.0	0.0
7	5.5	9.0	.2	18.3	0.0	0.0	0.0
8	5.5	9.0	.2	12.1	0.0	0.0	0.0
9	5.5	9.0	.2	21.9	0.0	0.0	0.0
10	5.5	9.0	.2	18.7	0.0	0.0	0.0
11	5.5	9.0	.2	24.4	0.0	0.0	0.0
12	3.8	9.0	.2	11.2	0.0	0.0	0.0
13	5.5	9.0	.2	19.7	0.0	0.0	0.0
14	5.5	9.0	.2	10.7	0.0	0.0	0.0
15	5.5	9.0	.2	8.9	0.0	0.0	0.0
16	5.8	9.0	.2	14.6	0.0	0.0	0.0
17	5.6	9.0	.2	21.2	0.0	0.0	0.0
18	5.5	9.0	.2	13.1	0.0	0.0	0.0
19	5.5	9.0	.2	16.6	0.0	0.0	0.0
20	4.7	9.0	.2	12.2	0.0	0.0	0.0
MEAN	5.2	9.0	.2	17.8	0.0	0.0	0.0
STD DEV	.5	0.0	.0	5.9	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA RED WASH 2 DATE 13 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.3	0.0	0.0	24.4	0.0	0.0	0.0
2	6.1	0.0	0.0	21.6	0.0	0.0	0.0
3	6.1	0.0	0.0	27.5	0.0	0.0	0.0
4	6.1	0.0	0.0	14.8	0.0	0.0	0.0
5	6.1	0.0	0.0	12.4	0.0	0.0	0.0
6	6.0	0.0	0.0	13.9	0.0	0.0	0.0
7	6.3	0.0	0.0	16.8	0.0	0.0	0.0
8	6.0	0.0	0.0	13.4	0.0	0.0	0.0
9	6.0	0.0	0.0	12.6	0.0	0.0	0.0
10	6.2	0.0	0.0	19.2	0.0	0.0	0.0
11	6.0	0.0	0.0	24.2	0.0	0.0	0.0
12	6.0	0.0	0.0	21.5	0.0	0.0	0.0
13	6.0	0.0	0.0	16.2	0.0	0.0	0.0
14	6.0	0.0	0.0	10.1	0.0	0.0	0.0
15	6.1	0.0	0.0	9.0	0.0	0.0	0.0
16	6.3	0.0	0.0	16.6	0.0	0.0	0.0
17	6.2	0.0	0.0	20.8	0.0	0.0	0.0
18	6.0	0.0	0.0	13.0	0.0	0.0	0.0
19	6.0	0.0	0.0	16.0	0.0	0.0	0.0
20	6.0	0.0	0.0	10.9	0.0	0.0	0.0
MEAN	6.1	0.0	0.0	16.7	0.0	0.0	0.0
STD DEV	.1	0.0	0.0	5.2	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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  AGROPYRON SMITHII     STUDY AREA RED WASH 2          DATE 27   JULY   1981
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       PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.    NOS.
        NO.    STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/    VEG.
               VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM    PLANT
*****************************************************************************************
         1     6.1    0.0      .1     15.2    0.0     0.0     0.0     REPR. CULMS VERY SPARSE
         2     6.1    0.0      .1     21.2    0.0     0.0     0.0     DATA FOR CLIPPED CULMS:
         3     6.2    0.0      .1     26.8    0.0     0.0     0.0       PHEN.  HGHT.  SPKS.
         4     6.1    0.0      .1     14.5    0.0     0.0     0.0     1  14.0   34.5    8
         5     6.0    0.0      .1     12.4    0.0     0.0     0.0     2  13.5   31.0    7
         6     6.0    0.0      .2     24.2    0.0     0.0     0.0     3  14.0   23.4    4
         7     6.1    0.0      .1     16.9    0.0     0.0     0.0     4  14.5   18.2   11
         8     6.2    0.0      .1      5.7    0.0     0.0     0.0     5  14.5   30.5   10
         9     6.1    0.0      .1     21.8    0.0     0.0     0.0     6  15.0   24.3   11
        10     6.0    0.0      .1     15.6    0.0     0.0     0.0     7  15.0   20.5   11
        11     6.0    0.0      .2     24.1    0.0     0.0     0.0     8  14.0   29.8   16
        12     6.3    0.0      .2     17.1    0.0     0.0     0.0     9  14.5   17.3   11
        13     6.2    0.0      .2     14.6    0.0     0.0     0.0
        14     6.1    0.0      .1     10.1    0.0     0.0     0.0
        15     6.2    0.0      .1      9.0    0.0     0.0     0.0
        16     6.2    0.0      .1     14.9    0.0     0.0     0.0
        17     6.1    0.0      .1     20.8    0.0     0.0     0.0
        18     6.1    0.0      .1     13.2    0.0     0.0     0.0
        19     6.0    0.0      .1     14.5    0.0     0.0     0.0
        20     6.1    0.0      .1     12.5    0.0     0.0     0.0


     MEAN      6.1    0.0      .1     16.4    0.0     0.0     0.0

  STD DEV       .1    0.0      .0      5.7    0.0     0.0     0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII    STUDY AREA RED WASH 2          DATE 10   AUGUST 1981
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      PLANT  PHENOLOGICAL   MAX.    MAX.     MAX.    NOS.    NOS.
       NO.   STAGE  SCORE   LEAF    LEAF     SPIKE   SPK/    VEG.
             VEG.   REPR.   WIDTH   HGHT.    HGHT.   CULM    PLANT
***********************************************************************************
        1     6.4    0.0     .1     24.0     0.0     0.0     0.0
        2     6.5    0.0     .1     19.0     0.0     0.0     0.0
        3     6.6    0.0     .2     31.0     0.0     0.0     0.0
        4     6.5    0.0     .1     15.0     0.0     0.0     0.0
        5     6.5    0.0     .1     12.1     0.0     0.0     0.0
        6     6.4    0.0     .2     15.2     0.0     0.0     0.0
        7     6.6    0.0     .1     17.3     0.0     0.0     0.0
        8     6.4    0.0     .2     26.5     0.0     0.0     0.0
        9     6.4    0.0     .1     12.5     0.0     0.0     0.0
       10     6.3    0.0     .1     14.3     0.0     0.0     0.0
       11     6.4    0.0     .2     25.3     0.0     0.0     0.0
       12     6.8    0.0     .1     11.3     0.0     0.0     0.0
       13     6.5    0.0     .1     19.9     0.0     0.0     0.0
       14     6.2    0.0     .1     10.0     0.0     0.0     0.0
       15     6.6    0.0     .1      8.0     0.0     0.0     0.0
       16     6.4    0.0     .1     14.4     0.0     0.0     0.0
       17     6.5    0.0     .1     21.0     0.0     0.0     0.0
       18     6.3    0.0     .1     13.1     0.0     0.0     0.0
       19     6.1    0.0     .2     16.1     0.0     0.0     0.0
       20     6.5    0.0     .1     11.0     0.0     0.0     0.0


     MEAN     6.4    0.0     .1     16.9     0.0     0.0     0.0

   STD DEV     .2    0.0     .0      6.1     0.0     0.0     0.0


   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
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 AGROPYRON SMITHII     STUDY AREA RED WASH 2            DATE 25   AUGUST 1981
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      PLANT  PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
       NO.   STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
             VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
****************************************************************************************
         1    6.4    0.0    0.0    14.5     0.0     0.0    0.0
         2    6.4    0.0    0.0    25.5     0.0     0.0    0.0
         3    6.5    0.0    0.0    30.5     0.0     0.0    0.0
         4    6.3    0.0    0.0    15.0     0.0     0.0    0.0
         5    6.2    0.0    0.0    12.3     0.0     0.0    0.0
         6    6.3   16.9    0.0    23.0    33.3     0.0    0.0
         7    6.5    0.0    0.0    17.2     0.0     0.0    0.0
         8    6.4    0.0    0.0     6.0     0.0     0.0    0.0
         9    6.4    0.0    0.0    21.0     0.0     0.0    0.0
        10    6.1    0.0    0.0    15.0     0.0     0.0    0.0
        11    6.2    0.0    0.0    24.2     0.0     0.0    0.0
        12    6.9    0.0    0.0    11.4     0.0     0.0    0.0
        13    6.8    0.0    0.0    12.7     0.0     0.0    0.0
        14    6.4    0.0    0.0    10.0     0.0     0.0    0.0
        15    6.6    0.0    0.0     8.3     0.0     0.0    0.0
        16    6.3    0.0    0.0    14.5     0.0     0.0    0.0
        17    6.1    0.0    0.0    25.1     0.0     0.0    0.0
        18    6.5    0.0    0.0    12.7     0.0     0.0    0.0
        19    6.3    0.0    0.0    14.5     0.0     0.0    0.0
        20    6.5    0.0    0.0    11.3     0.0     0.0    0.0


     MEAN     6.4   16.9    0.0    16.2    33.3     0.0    0.0

  STD DEV      .2    0.0    0.0     6.5     0.0     0.0    0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
  AGROPYRON SMITHII     STUDY AREA RED WASH 2          DATE 13   SEPT   1981
  -----------------                ----------               -----------------


        PLANT  PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.    NOS.
         NO.   STAGE   SCORE  LEAF    LEAF    SPIKE   SPK/    VEG.
               VEG.    REPR.  WIDTH   HGHT.   HGHT.   CULM    PLANT
*************************************************************************************
          1     6.4     0.0     0.0    20.5     0.0     0.0     0.0
          2     6.7     0.0     0.0    18.5     0.0     0.0     0.0
          3     6.8     0.0     0.0    21.0     0.0     0.0     0.0
          4     6.8     0.0     0.0    16.5     0.0     0.0     0.0
          5     6.5     0.0     0.0    15.5     0.0     0.0     0.0
          6     6.7     0.0     0.0    19.0     0.0     0.0     0.0
          7     6.9     0.0     0.0    13.0     0.0     0.0     0.0
          8     6.5     0.0     0.0    18.0     0.0     0.0     0.0
          9     6.7     0.0     0.0    16.5     0.0     0.0     0.0
         10     6.8     0.0     0.0    15.5     0.0     0.0     0.0
         11     6.7     0.0     0.0    24.5     0.0     0.0     0.0
         12     6.8     0.0     0.0    23.0     0.0     0.0     0.0
         13     6.5     0.0     0.0    19.0     0.0     0.0     0.0
         14     6.8     0.0     0.0    14.5     0.0     0.0     0.0
         15     6.8     0.0     0.0    13.0     0.0     0.0     0.0
         16     6.4     0.0     0.0    16.0     0.0     0.0     0.0
         17     6.8     0.0     0.0    26.5     0.0     0.0     0.0
         18     6.8     0.0     0.0    21.0     0.0     0.0     0.0
         19     6.5     0.0     0.0    15.5     0.0     0.0     0.0
         20     6.7     0.0     0.0    22.5     0.0     0.0     0.0


      MEAN      6.7     0.0     0.0    18.5     0.0     0.0     0.0

    STD DEV      .2     0.0     0.0     3.8     0.0     0.0     0.0

    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
  AGROPYRON SMITHII    STUDY AREA SHOSHONI 7          DATE  1   MAY     1981
-----------------------            -----------              ------------------

       PLANT   PHENOLOGICAL     MAX.     MAX.     MAX.     NOS.    NOS.
        NO.    STAGE   SCORE    LEAF     LEAF     SPIKE    SPK/    VEG.
               VEG.    REPR.    WIDTH    HGHT.    HGHT.    CULM    PLANT
********************************************************************************
         1     4.7     0.0       .2       9.8     0.0      0.0     1.0
         2     3.4     0.0       .2       8.4     0.0      0.0     1.0
         3     4.7     0.0       .2      16.3     0.0      0.0     1.0
         4     3.2     0.0       .1       4.8     0.0      0.0     1.0
         5     4.1     0.0       .2      11.8     0.0      0.0     1.0
         6     3.0     0.0       .2      15.3     0.0      0.0     1.0
         7     3.0     0.0       .2       6.0     0.0      0.0     2.0
         8     3.7     0.0       .3      14.3     0.0      0.0     2.0
         9     4.1     0.0       .1       9.1     0.0      0.0     1.0
        10     4.9     0.0       .2       8.3     0.0      0.0     1.0
        11     3.6     0.0       .2      10.2     0.0      0.0     2.0
        12     4.8     0.0       .2      15.4     0.0      0.0     1.0
        13     3.4     0.0       .2      12.1     0.0      0.0     1.0
        14     3.7     0.0       .2       9.1     0.0      0.0     1.0
        15     4.8     0.0       .2      12.4     0.0      0.0     1.0
        16     3.8     0.0       .2       9.8     0.0      0.0     1.0
        17     4.5     0.0       .2       8.3     0.0      0.0     1.0
        18     4.2     0.0       .2      13.3     0.0      0.0     1.0
        19     3.3     0.0       .2      10.2     0.0      0.0     1.0
        20     3.9     0.0       .2      17.6     0.0      0.0     2.0


     MEAN      3.9     0.0       .2      11.1     0.0      0.0     1.3

  STD DEV       .6     0.0       .0       3.4     0.0      0.0      .4

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII STUDY AREA SHOSHONI 7 DATE 20 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	PHENOLOGICAL SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	5.5	0.0	.3	13.3	0.0	0.0	1.0
2	3.9	0.0	.2	11.0	0.0	0.0	1.0
3	5.3	0.0	.3	19.3	0.0	0.0	1.0
4	4.6	0.0	.2	7.1	0.0	0.0	1.0
5	4.9	0.0	.2	19.1	0.0	0.0	1.0
6	4.2	0.0	.3	16.0	0.0	0.0	2.0
7	5.2	0.0	.3	15.2	0.0	0.0	1.0
8	4.2	0.0	.3	17.0	0.0	0.0	2.0
9	5.2	0.0	.3	14.0	0.0	0.0	1.0
10	5.0	0.0	.3	9.0	0.0	0.0	1.0
11	4.9	0.0	.2	14.0	0.0	0.0	2.0
12	5.6	0.0	.3	17.4	0.0	0.0	1.0
13	5.3	0.0	.3	14.6	0.0	0.0	1.0
14	4.8	0.0	.2	9.8	0.0	0.0	1.0
15	5.2	0.0	.2	18.3	0.0	0.0	1.0
16	4.6	0.0	.2	11.6	0.0	0.0	1.0
17	5.1	0.0	.2	10.2	0.0	0.0	1.0
18	5.1	0.0	.2	13.3	0.0	0.0	1.0
19	3.9	0.0	.2	11.5	0.0	0.0	2.0
20	4.4	0.0	.3	17.6	0.0	0.0	1.0
MEAN	4.8	0.0	.3	14.0	0.0	0.0	1.2
STD DEV	.5	0.0	.1	3.5	0.0	0.0	.4

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
   AGROPYRON SMITHII    STUDY AREA SHOSHONI 7            DATE  3   JUNE   1981
  --------------------             ----------             ------------------

          PLANT  PHENOLOGICAL    MAX.    MAX.    MAX.    NOS.   NOS.
           NO.   STAGE  SCORE    LEAF    LEAF    SPIKE   SPK/   VEG.
                 VEG.   REPR.    WIDTH   HGHT.   HGHT.   CULM   PLANT
************************************************************************************
            1     5.5    0.0      .3     16.0    0.0     0.0    1.0
            2     4.6    0.0      .2     11.0    0.0     0.0    1.0
            3     5.6    0.0      .3     18.0    0.0     0.0    1.0
            4     5.6    0.0      .2     12.4    0.0     0.0    1.0
            5     4.9    0.0      .3     22.5    0.0     0.0    1.0
            6     4.8    0.0      .3     16.0    0.0     0.0    2.0
            7     5.3    0.0      .3     10.0    0.0     0.0    1.0
            8     4.9    0.0      .3     17.0    0.0     0.0    2.0
            9     5.3    0.0      .2     16.5    0.0     0.0    1.0
           10     5.3    0.0      .3     11.5    0.0     0.0    1.0
           11     5.2    0.0      .3     14.5    0.0     0.0    2.0
         . 12     5.9    0.0      .3     18.5    0.0     0.0    1.0
           13     5.5    0.0      .3     20.3    0.0     0.0    1.0
           14     4.9    0.0      .3     11.0    0.0     0.0    1.0
           15     5.2    0.0      .3     16.0    0.0     0.0    1.0
           16     5.7    0.0      .2     14.6    0.0     0.0    1.0
           17     5.3    0.0      .2      8.5    0.0     0.0    1.0
           18     5.2    0.0      .2     11.5    0.0     0.0    1.0
           19     4.8    0.0      .3     12.0    0.0     0.0    2.0
           20     5.4    0.0      .3     17.2    0.0     0.0    1.0

        MEAN      5.2    0.0      .3     14.8    0.0     0.0    1.2

      STD DEV      .3    0.0      .0      3.7    0.0     0.0     .4

      0.0 = NOT RECORDED

      MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII STUDY AREA SHOSHONI 7 DATE 18 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	5.9	0.0	0.0	16.5	0.0	0.0	0.0
2	5.9	0.0	0.0	11.1	0.0	0.0	0.0
3	5.8	0.0	0.0	19.1	0.0	0.0	0.0
4	5.8	0.0	0.0	13.1	0.0	0.0	0.0
5	5.7	0.0	0.0	23.2	0.0	0.0	0.0
6	5.8	0.0	0.0	20.5	0.0	0.0	0.0
7	5.9	0.0	0.0	9.9	0.0	0.0	0.0
8	6.0	0.0	0.0	17.3	0.0	0.0	0.0
9	5.8	0.0	0.0	16.9	0.0	0.0	0.0
10	5.7	0.0	0.0	11.6	0.0	0.0	0.0
11	5.8	0.0	0.0	15.0	0.0	0.0	0.0
12	5.9	0.0	0.0	19.5	0.0	0.0	0.0
13	6.0	0.0	0.0	21.5	0.0	0.0	0.0
14	5.8	0.0	0.0	11.2	0.0	0.0	0.0
15	5.9	0.0	0.0	18.2	0.0	0.0	0.0
16	5.9	0.0	0.0	12.0	0.0	0.0	0.0
17	5.8	0.0	0.0	13.5	0.0	0.0	0.0
18	5.9	0.0	0.0	12.2	0.0	0.0	0.0
19	6.0	0.0	0.0	12.1	0.0	0.0	0.0
20	6.0	0.0	0.0	17.6	0.0	0.0	0.0
MEAN	5.9	0.0	0.0	15.6	0.0	0.0	0.0
STD DEV	.1	0.0	0.0	3.9	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
  AGROPYRON SMITHII    STUDY AREA SHOSHONI 7          DATE 30    JUNE    1981
 -------------------              ----------              ----------------

       PLANT  PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.    NOS.
        NO.   STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/    VEG.
              VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM    PLANT
*******************************************************************************
         1    6.0    0.0     0.0     16.0    0.0     0.0     0.0
         2    6.0    0.0     0.0     11.0    0.0     0.0     0.0
         3    6.0    0.0     0.0     19.6    0.0     0.0     0.0
         4    6.0    0.0     0.0     12.5    0.0     0.0     0.0
         5    6.0    0.0     0.0     23.5    0.0     0.0     0.0
         6    6.1    0.0     0.0     19.0    0.0     0.0     0.0
         7    5.9    0.0     0.0     10.0    0.0     0.0     0.0
         8    6.0    0.0     0.0     13.0    0.0     0.0     0.0
         9    6.0    0.0     0.0     16.2    0.0     0.0     0.0
        10    5.9    0.0     0.0     11.5    0.0     0.0     0.0
        11    6.0    0.0     0.0     15.0    0.0     0.0     0.0
        12    6.1    0.0     0.0     19.5    0.0     0.0     0.0
        13    6.0    0.0     0.0     22.0    0.0     0.0     0.0
        14    5.9    0.0     0.0     11.0    0.0     0.0     0.0
        15    6.1    0.0     0.0     17.0    0.0     0.0     0.0
        16    5.9    0.0     0.0     11.2    0.0     0.0     0.0
        17    5.9    0.0     0.0     15.2    0.0     0.0     0.0
        18    5.9    0.0     0.0     13.2    0.0     0.0     0.0
        19    6.0    0.0     0.0     11.6    0.0     0.0     0.0
        20    6.0    0.0     0.0     17.0    0.0     0.0     0.0

     MEAN     6.0    0.0     0.0     15.3    0.0     0.0     0.0

  STD DEV      .1    0.0     0.0      4.0    0.0     0.0     0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
```

```
AGROPYRON SMITHII    STUDY AREA SHOSHONI 7          DATE 13   JULY   1981
---------------------                 ----------                   ------------------


   PLANT   PHENOLOGICAL    MAX.    MAX.    MAX.    NOS.   NOS.
    NO.    STAGE   SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
           VEG.    REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
**************************************************************************************
     1     6.3     0.0      .2     16.6    0.0     0.0    1.0
     2     6.5     0.0      .1     10.6    0.0     0.0    1.0      RANDOM REPRO SAMPLE:
     3     6.4     0.0      .2     20.2    0.0     0.0    1.0
     4     6.3     0.0      .1     13.6    0.0     0.0    1.0       PHENO   HGHT   #SPKS.
     5     6.5     0.0      .2     23.3    0.0     0.0    1.0        15.8   55.5     9
     6     6.2     0.0      .2     20.5    0.0     0.0    1.0        18.0   52.5     7
     7     6.0     0.0      .1     10.1    0.0     0.0    2.0        18.0   47.1     8
     8     6.1     0.0      .1      9.3    0.0     0.0    1.0        12.5   66.5     9
     9     6.1     0.0      .2     16.9    0.0     0.0    1.0        12.0   71.9     9
    10     6.2     0.0      .2     12.1    0.0     0.0    1.0
    11     6.5     0.0      .2     15.4    0.0     0.0    2.0
    12     6.4     0.0      .2     19.2    0.0     0.0    1.0
    13     6.3     0.0      .2     21.7    0.0     0.0    1.0
    14     6.5     0.0      .1     11.6    0.0     0.0    1.0
    15     6.5     0.0      .2     16.5    0.0     0.0    1.0
    16     6.5     0.0      .2     12.5    0.0     0.0    1.0
    17     6.4     0.0      .2     14.8    0.0     0.0    1.0
    18     6.5     0.0      .2     12.7    0.0     0.0    1.0
    19     6.5     0.0      .1     10.7    0.0     0.0    2.0
    20     6.2     0.0      .2     16.6    0.0     0.0    1.0


  MEAN     6.3     0.0      .2     15.2    0.0     0.0    1.2

 STD DEV    .2     0.0      .0      4.1    0.0     0.0     .4


 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
```

```
  AGROPYRON SMITHII   STUDY AREA SHOSHONI 7            DATE 27   JULY   1981
--------------------              ----------                ------------------

      PLANT  PHENOLOGICAL  MAX.    MAX.    MAX.    NOS.   NOS.
       NO.   STAGE  SCORE  LEAF    LEAF    SPIKE   SPK/   VEG.
             VEG.   REPR.  WIDTH   HGHT.   HGHT.   CULM   PLANT
*****************************************************************************
         1   6.1    0.0    0.0    16.4     0.0     0.0     0.0
         2   6.4    0.0    0.0    10.5     0.0     0.0     0.0
         3   6.4    0.0    0.0    19.1     0.0     0.0     0.0
         4   6.2    0.0    0.0    13.1     0.0     0.0     0.0
         5   6.3    0.0    0.0    24.6     0.0     0.0     0.0
         6   6.1    0.0    0.0    20.1     0.0     0.0     0.0
         7   6.2    0.0    0.0     9.4     0.0     0.0     0.0
         8   6.2    0.0    0.0    14.8     0.0     0.0     0.0
         9   6.3    0.0    0.0    16.5     0.0     0.0     0.0
        10   6.3    0.0    0.0    15.0     0.0     0.0     0.0
        11   6.4    0.0    0.0    17.1     0.0     0.0     0.0
        12   6.3    0.0    0.0    18.6     0.0     0.0     0.0
        13   6.3    0.0    0.0    21.7     0.0     0.0     0.0
        14   6.3    0.0    0.0    11.1     0.0     0.0     0.0
        15   6.4    0.0    0.0    18.2     0.0     0.0     0.0
        16   6.3    0.0    0.0    12.2     0.0     0.0     0.0
        17   6.5    0.0    0.0    14.2     0.0     0.0     0.0
        18   6.2    0.0    0.0    12.0     0.0     0.0     0.0
        19   6.5    0.0    0.0    11.3     0.0     0.0     0.0
        20   6.1    0.0    0.0    16.5     0.0     0.0     0.0

     MEAN    6.3    0.0    0.0    15.6     0.0     0.0     0.0

  STD DEV     .1    0.0    0.0     4.0     0.0     0.0     0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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```
AGROPYRON SMITHII   STUDY AREA SHOSHONI 7          DATE 10   AUGUST 1981
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      PLANT   PHENOLOGICAL     MAX.     MAX.     MAX.    NOS.    NOS.
       NO.    STAGE   SCORE    LEAF     LEAF     SPIKE   SPK/    VEG.
              VEG.    REPR.    WIDTH    HGHT.    HGHT.   CULM    PLANT
*****************************************************************************
        1      6.2     0.0      .2      16.0      0.0     0.0     0.0
        2      6.5     0.0      .1       8.5      0.0     0.0     0.0
        3      6.4     0.0      .2      20.0      0.0     0.0     0.0
        4      6.3     0.0      .1      12.2      0.0     0.0     0.0
        5      6.3     0.0      .2      23.0      0.0     0.0     0.0
        6      6.1     0.0      .3      20.6      0.0     0.0     0.0
        7      6.3     0.0      .1      10.0      0.0     0.0     0.0
        8      6.2     0.0      .2       9.4      0.0     0.0     0.0
        9      6.3     0.0      .2      11.0      0.0     0.0     0.0          10-35% USE BY
       10      6.4     0.0      .2      11.0      0.0     0.0     0.0          GRASSHOPPERS
       11      6.4     0.0      .2      13.8      0.0     0.0     0.0
       12      6.3     0.0      .2      19.3      0.0     0.0     0.0
       13      6.3     0.0      .3      22.4      0.0     0.0     0.0
       14      6.3     0.0      .1      11.5      0.0     0.0     0.0
       15      6.4     0.0      .1      17.8      0.0     0.0     0.0
       16      6.4     0.0      .1      12.7      0.0     0.0     0.0
       17      6.5     0.0      .1      14.7      0.0     0.0     0.0
       18      6.2     0.0      .1      13.1      0.0     0.0     0.0
       19      6.5     0.0      .1      11.1      0.0     0.0     0.0
       20      6.1     0.0      .1      16.8      0.0     0.0     0.0


     MEAN      6.3     0.0      .2      14.7      0.0     0.0     0.0

   STD DEV      .1     0.0      .1       4.5      0.0     0.0     0.0


   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII STUDY AREA SHOSHONI 7 DATE 24 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.3	0.0	.2	16.9	0.0	0.0	0.0
2	6.6	0.0	.1	8.8	0.0	0.0	0.0
3	6.4	0.0	.2	20.1	0.0	0.0	0.0
4	6.5	0.0	.1	13.6	0.0	0.0	0.0
5	6.4	0.0	.2	26.8	0.0	0.0	0.0
6	6.5	0.0	.2	20.5	0.0	0.0	0.0
7	6.5	0.0	.2	10.1	0.0	0.0	0.0
8	6.3	0.0	.2	9.6	0.0	0.0	0.0
9	6.4	0.0	.2	11.5	0.0	0.0	0.0
10	6.5	0.0	.2	12.3	0.0	0.0	0.0
11	6.5	0.0	.2	14.0	0.0	0.0	0.0
12	6.3	0.0	.3	19.2	0.0	0.0	0.0
13	6.3	0.0	.3	22.0	0.0	0.0	0.0
14	6.5	0.0	.1	11.7	0.0	0.0	0.0
15	6.4	0.0	.2	17.5	0.0	0.0	0.0
16	6.5	0.0	.1	8.6	0.0	0.0	0.0
17	6.5	0.0	.2	14.6	0.0	0.0	0.0
18	6.6	0.0	.1	12.2	0.0	0.0	0.0
19	6.6	0.0	.1	11.7	0.0	0.0	0.0
20	6.4	0.0	.2	17.2	0.0	0.0	0.0
MEAN	6.5	0.0	.2	14.9	0.0	0.0	0.0
STD DEV	.1	0.0	.1	4.9	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
  AGROPYRON SMITHII    STUDY AREA SHOSHONI 7            DATE 11   SEPT   1981
--------------------              ----------              ------------------

          PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.    NOS.
           NO.    STAGE   SCORE  LEAF    LEAF    SPIKE   SPK/    VEG.
                  VEG.    REPR.  WIDTH   HGHT.   HGHT.   CULM    PLANT
****************************************************************************************
            1     7.2     0.0    0.0     0.0     0.0     0.0     0.0
            2     7.1     0.0    0.0     0.0     0.0     0.0     0.0
            3     7.2     0.0    0.0     0.0     0.0     0.0     0.0
            4     7.3     0.0    0.0     0.0     0.0     0.0     0.0
            5     7.0     0.0    0.0     0.0     0.0     0.0     0.0
            6     7.0     0.0    0.0     0.0     0.0     0.0     0.0
            7     7.1     0.0    0.0     0.0     0.0     0.0     0.0
            8     7.1     0.0    0.0     0.0     0.0     0.0     0.0
            9     6.9     0.0    0.0     0.0     0.0     0.0     0.0
           10     8.0     0.0    0.0     0.0     0.0     0.0     0.0
           11     7.2     0.0    0.0     0.0     0.0     0.0     0.0
           12     7.1     0.0    0.0     0.0     0.0     0.0     0.0
           13     7.2     0.0    0.0     0.0     0.0     0.0     0.0
           14     7.2     0.0    0.0     0.0     0.0     0.0     0.0
           15     7.3     0.0    0.0     0.0     0.0     0.0     0.0
           16     7.0     0.0    0.0     0.0     0.0     0.0     0.0
           17     6.9     0.0    0.0     0.0     0.0     0.0     0.0
           18     7.2     0.0    0.0     0.0     0.0     0.0     0.0
           19     7.2     0.0    0.0     0.0     0.0     0.0     0.0
           20     7.1     0.0    0.0     0.0     0.0     0.0     0.0

        MEAN      7.2     0.0    0.0     0.0     0.0     0.0     0.0

     STD DEV       .2     0.0    0.0     0.0     0.0     0.0     0.0

     0.0 = NOT RECORDED

     MEASUREMENTS IN CENTIMETERS
  AGROPYRON SMITHII     STUDY AREA SWEETWATER            DATE 21   MAY    1981
---------------------              ----------                  -----------------

          PLANT  PHENOLOGICAL  MAX.   MAX.   MAX.   NOS.   NOS.
           NO.   STAGE  SCORE  LEAF   LEAF   SPIKE  SPK/   VEG.
                 VEG.   REPR.  WIDTH  HGHT.  HGHT.  CULM   PLANT
*******************************************************************************
            1    4.8    0.0     .3    13.8   0.0    0.0    2.0
            2    3.9    0.0     .2    11.5   0.0    0.0    3.0
            3    3.7    0.0     .2    12.2   0.0    0.0    3.0
            4    4.9    0.0     .2    15.2   0.0    0.0    2.0
            5    4.9    0.0     .2    17.3   0.0    0.0    1.0
            6    4.9    0.0     .3    22.5   0.0    0.0    2.0
            7    5.2    0.0     .2    10.0   0.0    0.0    3.0
            8    4.3    0.0     .2    19.0   0.0    0.0    2.0
            9    4.3    0.0     .3    16.5   0.0    0.0    1.0
           10    3.8    0.0     .2    20.5   0.0    0.0    1.0
           11    4.3    0.0     .2    13.1   0.0    0.0    2.0
           12    3.7    0.0     .2    11.8   0.0    0.0    1.0
           13    4.8    0.0     .2    28.5   0.0    0.0    2.0
           14    4.8    0.0     .2    11.5   0.0    0.0    2.0
           15    4.3    0.0     .2    21.3   0.0    0.0    4.0
           16    4.9    0.0     .3    16.0   0.0    0.0    2.0
           17    4.9    0.0     .2    19.0   0.0    0.0    2.0
           18    4.7    0.0     .2    14.3   0.0    0.0    1.0
           19    4.9    0.0     .1    13.0   0.0    0.0    2.0
           20    5.1    0.0     .2    17.0   0.0    0.0    1.0

       MEAN      4.6    0.0     .2    16.2   0.0    0.0    2.0

    STD DEV       .5    0.0     .0     4.6   0.0    0.0     .8

    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
```

```
 AGROPYRON SMITHII     STUDY AREA SWEETWATER           DATE 25   MAY    1981
---------------------             -----------                 ------------------


        PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.    NOS.
         NO.    STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/    VEG.
                VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM    PLANT
**********************************************************************************
          1     4.9    0.0      .3     15.2    0.0     0.0     2.0
          2     4.1    0.0      .2     13.0    0.0     0.0     3.0
          3     4.4    0.0      .2     14.5    0.0     0.0     3.0
          4     4.9    0.0      .2     15.2    0.0     0.0     2.0
          5     5.2    0.0      .2     18.5    0.0     0.0     1.0
          6     5.3    0.0      .3     22.5    0.0     0.0     2.0
          7     5.3    0.0      .3     13.5    0.0     0.0     3.0
          8     4.7    0.0      .2     19.2    0.0     0.0     2.0
          9     4.6    0.0      .3     18.2    0.0     0.0     1.0
         10     4.0    0.0      .2     21.9    0.0     0.0     1.0
         11     4.4    0.0      .2     14.8    0.0     0.0     2.0
         12     4.2    0.0      .2     12.2    0.0     0.0     1.0
         13     5.0    0.0      .3     32.1    0.0     0.0     2.0
         14     5.1    9.0      .2     12.6    0.0     0.0     2.0
         15     5.0    0.0      .3     22.5    0.0     0.0     4.0
         16     5.0    0.0      .2     18.0    0.0     0.0     2.0
         17     5.3    0.0      .3     20.9    0.0     0.0     2.0
         18     4.9    0.0      .2     14.5    0.0     0.0     1.0
         19     4.9    0.0      .2     14.5    0.0     0.0     1.0
         20     5.2    0.0      .2     19.0    0.0     0.0     1.0


      MEAN      4.8    9.0      .2     17.6    0.0     0.0     1.9

    STD DEV      .4    0.0      .0      4.8    0.0     0.0      .9


    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
```

```
  AGROPYRON SMITHII    STUDY AREA SWEETWATER          DATE 09   JUNE   1981
---------------------             ----------           ------------------

         PLANT  PHENOLOGICAL  MAX.   MAX.   MAX.   NOS.  NOS.
          NO.   STAGE  SCORE  LEAF   LEAF   SPIKE  SPK/  VEG.
                VEG.   REPR.  WIDTH  HGHT.  HGHT.  CULM  PLANT
*************************************************************************************
           1    5.4    0.0     .3    16.7   0.0    0.0    2.0
           2    5.1    0.0     .3    10.1   0.0    0.0    1.0       NEW PLANT
           3    4.9    0.0     .3    14.2   0.0    0.0    3.0
           4    5.4    0.0     .3    19.0   0.0    0.0    1.0
           5    5.2    0.0     .3    21.7   0.0    0.0    1.0
           6    5.7    0.0     .4    21.9   0.0    0.0    2.0
           7    5.3    0.0     .3    18.4   0.0    0.0    1.0       NEW PLANT
           8    5.3    0.0     .4    22.0   0.0    0.0    2.0       NEW PLANT
           9    5.7    0.0     .3    16.0   0.0    0.0    1.0       NEW PLANT
         .10    5.3    0.0     .3    22.0   0.0    0.0    2.0       NEW PLANT
          11    5.5    0.0     .3    16.5   0.0    0.0    2.0
          12    5.2    0.0     .3    14.6   0.0    0.0    1.0
          13    5.5    0.0     .3    30.0   0.0    0.0    2.0
          14    5.3    0.0     .4    14.0   0.0    0.0    2.0
          15    6.0    9.0     .4    32.5   0.0    0.0    4.0       NEW PLANT
          16    6.0    0.0     .4    20.2   0.0    0.0    2.0
          17    5.5    0.0     .3    16.5   0.0    0.0    2.0
          18    4.9    0.0     .3    16.0   0.0    0.0    3.0
          19    5.4    0.0     .3    15.1   0.0    0.0    1.0
          20    5.4    0.0     .3    19.6   0.0    0.0    1.0


       MEAN     5.4    9.0     .3    18.9   0.0    0.0    1.8

    STD DEV      .3    0.0     .0     5.3   0.0    0.0     .8

    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII   STUDY AREA SWEETWATER   DATE 17 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	5.6	0.0	.3	18.7	0.0	0.0	2.0
2	5.3	0.0	.3	15.5	0.0	0.0	1.0
3	5.5	0.0	.3	19.0	0.0	0.0	2.0
4	5.5	0.0	.3	19.6	0.0	0.0	1.0
5	5.6	0.0	.3	22.5	0.0	0.0	1.0
6	5.7	0.0	.3	23.6	0.0	0.0	2.0
7	5.5	0.0	.3	19.1	0.0	0.0	1.0
8	5.6	0.0	.3	22.2	0.0	0.0	2.0
9	5.7	0.0	.3	16.5	0.0	0.0	1.0
10	5.6	0.0	.3	22.2	0.0	0.0	2.0
11	5.6	0.0	.3	18.2	0.0	0.0	2.0
12	5.3	0.0	.2	15.0	0.0	0.0	2.0
13	5.5	0.0	.3	21.7	0.0	0.0	2.0
14	5.6	0.0	.3	14.2	0.0	0.0	2.0
15	5.8	0.0	.3	34.0	0.0	0.0	4.0
16	5.9	0.0	.3	20.5	0.0	0.0	2.0
17	5.7	0.0	.3	17.0	0.0	0.0	2.0
18	5.2	0.0	.3	18.8	0.0	0.0	3.0
19	5.5	0.0	.3	15.2	0.0	0.0	1.0
20	5.5	0.0	.3	20.1	0.0	0.0	1.0
MEAN	5.6	0.0	.3	19.7	0.0	0.0	1.8
STD DEV	.2	0.0	.0	4.3	0.0	0.0	.8

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
  AGROPYRON SMITHII     STUDY AREA SWEETWATER          DATE  1   JULY   1981
 ----------------------            ----------               ------------------

       PLANT   PHENOLOGICAL   MAX.    MAX.     MAX.    NOS.   NOS.
        NO.    STAGE  SCORE   LEAF    LEAF     SPIKE   SPK/   VEG.
               VEG.   REPR.   WIDTH   HGHT.    HGHT.   CULM   PLANT
********************************************************************************
          1    5.6    0.0      .2     21.0     0.0     0.0     0.0
          2    5.5    0.0      .2     10.0     0.0     0.0     0.0
          3    5.5    0.0      .3     20.0     0.0     0.0     0.0
          4    5.5    0.0      .3     20.0     0.0     0.0     0.0
          5    5.6    0.0      .3     22.0     0.0     0.0     0.0
          6    5.7    0.0      .3     30.0     0.0     0.0     0.0
          7    5.5    0.0      .2     18.0     0.0     0.0     0.0     NEW PLANT
          8    5.6    0.0      .2     22.0     0.0     0.0     0.0
          9    5.7    0.0      .2     15.0     0.0     0.0     0.0
         10    5.6    0.0      .2     20.0     0.0     0.0     0.0
         11    5.6    0.0      .2     16.0     0.0     0.0     0.0
         12    5.5    0.0      .2     14.0     0.0     0.0     0.0
         13    5.5    0.0      .2     27.0     0.0     0.0     0.0
         14    5.6    0.0      .2     14.0     0.0     0.0     0.0
         15    5.8    0.0      .3     24.0     0.0     0.0     0.0
         16    5.9    0.0      .3     20.0     0.0     0.0     0.0
         17    5.7    0.0      .2     13.0     0.0     0.0     0.0
         18    5.5    0.0      .2     15.0     0.0     0.0     0.0
         19    5.5    0.0      .2     16.0     0.0     0.0     0.0
         20    5.5    0.0      .2     17.0     0.0     0.0     0.0


     MEAN      5.6    0.0      .2     18.7     0.0     0.0     0.0

  STD DEV       .1    0.0      .0      4.9     0.0     0.0     0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII STUDY AREA SWEETWATER DATE 15 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.0	0.0	0.0	20.0	0.0	0.0	0.0
2	5.9	0.0	0.0	10.2	0.0	0.0	0.0
3	6.3	0.0	0.0	19.0	0.0	0.0	0.0
4	6.1	0.0	0.0	18.8	0.0	0.0	0.0
5	6.2	0.0	0.0	22.0	0.0	0.0	0.0
6	6.3	0.0	0.0	27.7	0.0	0.0	0.0
7	6.3	0.0	0.0	12.0	0.0	0.0	0.0
8	6.5	0.0	0.0	21.5	0.0	0.0	0.0
9	6.0	0.0	0.0	8.1	0.0	0.0	0.0
10	6.1	0.0	0.0	22.6	0.0	0.0	0.0
11	6.3	0.0	0.0	15.2	0.0	0.0	0.0
12	6.5	0.0	0.0	16.0	0.0	0.0	0.0
13	5.9	0.0	0.0	21.4	0.0	0.0	0.0
14	6.3	0.0	0.0	14.6	0.0	0.0	0.0
15	6.5	14.2	0.0	33.0	33.5	7.0	0.0
16	6.1	0.0	0.0	20.0	0.0	0.0	0.0
17	6.3	0.0	0.0	12.2	0.0	0.0	0.0
18	6.2	0.0	0.0	19.6	0.0	0.0	0.0
19	6.4	0.0	0.0	9.0	0.0	0.0	0.0
20	6.0	0.0	0.0	10.8	0.0	0.0	0.0
MEAN	6.2	14.2	0.0	17.7	33.5	7.0	0.0
STD DEV	.2	0.0	0.0	6.4	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
AGROPYRON SMITHII     STUDY AREA SWEETWATER             DATE 29    JULY    1981
---------------------                ----------                        ------------------

      PLANT   PHENOLOGICAL    MAX.    MAX.    MAX.     NOS.   NOS.
       NO.    STAGE   SCORE   LEAF    LEAF    SPIKE    SPK/   VEG.
              VEG.    REPR.   WIDTH   HGHT.   HGHT.    CULM   PLANT
**************************************************************************************
        1     5.9     0.0      .2     18.5     0.0     0.0     0.0
        2     6.2     0.0      .2     16.0     0.0     0.0     0.0
        3     6.0     0.0      .1     17.0     0.0     0.0     0.0
        4     6.9     0.0     0.0     15.2     0.0     0.0     0.0
        5     6.3     0.0      .1     21.0     0.0     0.0     0.0
        6     6.3     0.0      .1     29.0     0.0     0.0     0.0
        7     6.2     0.0     0.0     11.0     0.0     0.0     0.0
        8     6.3     0.0      .1     22.0     0.0     0.0     0.0
        9     6.0     0.0      .1      5.0     0.0     0.0     0.0
       10     6.1     0.0      .1     19.5     0.0     0.0     0.0
       11     6.1     0.0      .1     15.5     0.0     0.0     0.0
       12     6.5     0.0     0.0     15.0     0.0     0.0     0.0
       13     6.4     0.0     0.0     22.0     0.0     0.0     0.0
       14     6.2     0.0     0.0     11.0     0.0     0.0     0.0      NEW PLANT
       15     6.3    14.8     0.0     34.0    34.0     0.0     0.0
       16     6.1     0.0      .2     21.0     0.0     0.0     0.0
       17     6.1     0.0     0.0     13.0     0.0     0.0     0.0
       18     6.1     0.0      .1     20.5     0.0     0.0     0.0
       19     6.2     0.0      .1      9.0     0.0     0.0     0.0
       20     6.3     0.0      .1     19.5     0.0     0.0     0.0

    MEAN      6.2    14.8      .1     17.7    34.0     0.0     0.0

 STD DEV       .2     0.0      .0      6.6     0.0     0.0     0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
 AGROPYRON SMITHII    STUDY AREA SWEETWATER          DATE 12   AUGUST 1981
---------------------              ----------                 ------------------

       PLANT  PHENOLOGICAL  MAX.   MAX.   MAX.   NOS.   NOS.
        NO.   STAGE  SCORE  LEAF   LEAF   SPIKE  SPK/   VEG.
              VEG.   REPR.  WIDTH  HGHT.  HGHT.  CULM   PLANT
*************************************************************************************
         1    6.2    0.0     .2    18.5    0.0    0.0    2.0
         2    6.3    0.0     .1    10.0    0.0    0.0    1.0
         3    6.2    0.0     .2    20.2    0.0    0.0    2.0
         4    6.2    0.0     .2    19.5    0.0    0.0    2.0
         5    6.2    0.0     .2    20.2    0.0    0.0    1.0
         6    6.4    0.0     .2    28.1    0.0    0.0    1.0
         7    6.3    0.0     .2    18.7    0.0    0.0    2.0
         8    6.2    0.0     .1    15.8    0.0    0.0    1.0
         9    6.2    0.0     .1    15.1    0.0    0.0    5.0
        10    6.2    0.0     .2    21.7    0.0    0.0    5.0
        11    6.2    0.0     .1    16.9    0.0    0.0    2.0
        12    6.6    0.0     .1    15.9    0.0    0.0    1.0
        13    6.5    0.0     .1    21.4    0.0    0.0    3.0
        14    6.4    0.0     .1    20.5    0.0    0.0    4.0
        15    6.5   16.5     .2    33.2   34.0    0.0    4.0
        16    6.3    0.0     .2    20.8    0.0    0.0    2.0
        17    6.5    0.0     .1    12.7    0.0    0.0    2.0
        18    6.2    0.0     .1    18.5    0.0    0.0    3.0
        19    6.5    0.0     .1    17.9    0.0    0.0    1.0
        20    6.6    0.0     .1    19.4    0.0    0.0    1.0

      MEAN    6.3   16.5     .1    19.3   34.0    0.0    2.3

   STD DEV     .1    0.0     .1     5.0    0.0    0.0    1.3

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII   STUDY AREA SWEETWATER   DATE 24 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.1	0.0	0.0	17.5	0.0	0.0	0.0
2	6.7	0.0	0.0	9.9	0.0	0.0	0.0
3	6.2	0.0	0.0	16.2	0.0	0.0	0.0
4	6.5	0.0	0.0	18.1	0.0	0.0	0.0
5	6.5	0.0	0.0	19.0	0.0	0.0	0.0
6	8.0	0.0	0.0	27.0	0.0	0.0	0.0
7	6.6	0.0	0.0	19.5	0.0	0.0	0.0
8	6.7	0.0	0.0	18.1	0.0	0.0	0.0
9	6.6	0.0	0.0	15.6	0.0	0.0	0.0
10	6.3	0.0	0.0	22.0	0.0	0.0	0.0
11	6.5	0.0	0.0	15.6	0.0	0.0	0.0
12	6.8	0.0	0.0	5.0	0.0	0.0	0.0
13	6.7	0.0	0.0	21.2	0.0	0.0	0.0
14	6.7	0.0	0.0	13.5	0.0	0.0	0.0
15	6.7	0.0	0.0	35.0	35.0	0.0	0.0
16	6.5	0.0	0.0	19.5	0.0	0.0	0.0
17	6.5	0.0	0.0	16.4	0.0	0.0	0.0
18	6.7	0.0	0.0	16.1	0.0	0.0	0.0
19	6.8	0.0	0.0	19.0	0.0	0.0	0.0
20	7.0	0.0	0.0	5.0	0.0	0.0	0.0
MEAN	6.7	0.0	0.0	17.5	35.0	0.0	0.0
STD DEV	.4	0.0	0.0	6.7	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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 AGROPYRON SMITHII     STUDY AREA SWEETWATER          DATE 12   SEPT   1981
---------------------               ----------              ------------------

     PLANT   PHENOLOGICAL   MAX.     MAX.     MAX.     NOS.    NOS.
      NO.    STAGE  SCORE   LEAF     LEAF     SPIKE    SPK/    VEG.
             VEG.   REPR.   WIDTH    HGHT.    HGHT.    CULM    PLANT
*******************************************************************************************
       1     6.5    0.0     0.0     15.2      0.0      0.0     0.0
       2     6.7    0.0     0.0     19.3      0.0      0.0     0.0
       3     6.5    0.0     0.0     17.2      0.0      0.0     0.0
       4     6.5    0.0     0.0     24.1      0.0      0.0     0.0
       5     6.7    0.0     0.0     22.7      0.0      0.0     0.0
       6     8.0    0.0     0.0     16.6      0.0      0.0     0.0
       7     6.5    0.0     0.0     16.8      0.0      0.0     0.0
       8     8.0    0.0     0.0     16.6      0.0      0.0     0.0            NEW PLANTS LOCATED
       9     6.6    0.0     0.0     13.3      0.0      0.0     0.0            RANDOMLY ALONG LINE
      10     6.4    0.0     0.0     11.0      0.0      0.0     0.0
      11     6.6    0.0     0.0     20.8      0.0      0.0     0.0
      12     6.6    0.0     0.0     18.0      0.0      0.0     0.0
      13     6.4    0.0     0.0     17.5      0.0      0.0     0.0
      14     6.5    0.0     0.0     11.0      0.0      0.0     0.0
      15     6.7    0.0     0.0     19.6      0.0      0.0     0.0
      16     6.4    0.0     0.0     16.0      0.0      0.0     0.0
      17     6.6    0.0     0.0     17.5      0.0      0.0     0.0
      18     6.7    0.0     0.0     16.0      0.0      0.0     0.0
      19     6.9    0.0     0.0     18.0      0.0      0.0     0.0
      20     6.9    0.0     0.0     18.3      0.0      0.0     0.0


    MEAN     6.7    0.0     0.0     17.3      0.0      0.0     0.0

 STD DEV      .5    0.0     0.0      3.3      0.0      0.0     0.0


 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII STUDY AREA UPPER GOV DATE 1 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	4.3	0.0	.2	15.3	0.0	0.0	3.0
2	4.2	0.0	.2	18.4	0.0	0.0	2.0
3	4.5	0.0	.2	18.2	0.0	0.0	2.0
4	4.2	0.0	.2	14.6	0.0	0.0	4.0
5	4.5	0.0	.2	13.4	0.0	0.0	2.0
6	4.6	0.0	.2	16.8	0.0	0.0	3.0
7	4.4	0.0	.2	17.1	0.0	0.0	3.0
8	4.2	0.0	.2	8.2	0.0	0.0	1.0
9	4.0	0.0	.1	9.4	0.0	0.0	2.0
10	4.7	0.0	.2	13.2	0.0	0.0	1.0
11	4.6	0.0	.2	15.9	0.0	0.0	1.0
12	4.3	0.0	.2	11.5	0.0	0.0	1.0
13	4.3	0.0	.2	13.9	0.0	0.0	1.0
14	4.2	0.0	.2	11.2	0.0	0.0	1.0
15	4.0	0.0	.2	15.1	0.0	0.0	1.0
16	4.2	0.0	.2	12.4	0.0	0.0	1.0
17	4.4	0.0	.2	11.9	0.0	0.0	2.0
18	4.7	0.0	.2	16.3	0.0	0.0	1.0
19	4.3	0.0	.3	16.7	0.0	0.0	1.0
20	4.5	0.0	.2	15.2	0.0	0.0	2.0
MEAN	4.4	0.0	.2	14.2	0.0	0.0	1.8
STD DEV	.2	0.0	.0	2.8	0.0	0.0	.9

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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AGROPYRON SMITHII   STUDY AREA  UPPER GOV          DATE 25   MAY    1981
---------------------             ----------            ------------------

      PLANT   PHENOLOGICAL  MAX.    MAX.    MAX.    NOS.   NOS.
       NO.    STAGE  SCORE  LEAF    LEAF    SPIKE   SPK/   VEG.
              VEG.   REPR.  WIDTH   HGHT.   HGHT.   CULM   PLANT
*****************************************************************************
        1     4.5    0.0     .1     16.0    0.0     0.0    1.0
        2     4.5    0.0     .3     26.0    0.0     0.0    1.0
        3     4.5    0.0     .2     22.0    0.0     0.0    2.0
        4     4.4    0.0     .1     12.0    0.0     0.0    3.0
        5     4.7    0.0     .2     14.6    0.0     0.0    2.0
        6     4.7    0.0     .2     17.1    0.0     0.0    3.0
        7     4.4    0.0     .2     23.0    0.0     0.0    1.0
        8     4.5    0.0     .2     16.4    0.0     0.0    1.0
        9     4.5    0.0     .1     11.6    0.0     0.0    1.0
       10     4.8    0.0     .2     21.0    0.0     0.0    1.0
       11     4.8    0.0     .2     19.9    0.0     0.0    1.0
       12     4.4    0.0     .2     13.6    0.0     0.0    1.0
       13     5.1    0.0     .2     15.6    0.0     0.0    1.0
       14     4.3    0.0     .2     15.1    0.0     0.0    1.0
       15     4.6    0.0     .2     15.1    0.0     0.0    1.0
       16     4.5    0.0     .2     13.4    0.0     0.0    1.0
       17     4.6    0.0     .2     17.1    0.0     0.0    1.0
       18     4.9    0.0     .3     24.7    0.0     0.0    2.0
       19     4.8    0.0     .2     20.9    0.0     0.0    1.0
       20     4.7    0.0     .2     19.1    0.0     0.0    2.0


    MEAN      4.6    0.0     .2     17.7    0.0     0.0    1.4

  STD DEV      .2    0.0     .1      4.2    0.0     0.0     .7

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII STUDY AREA UPPER GOV DATE 06 JUNE 1981

PLANT NO.	PHENOLOGICAL		MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
	STAGE VEG.	SCORE REPR.					
1	5.5	0.0	.2	19.2	0.0	0.0	1.0
2	5.6	0.0	.3	21.7	0.0	0.0	1.0
3	5.4	0.0	.3	22.6	0.0	0.0	2.0
4	5.4	0.0	.2	13.5	0.0	0.0	3.0
5	5.2	0.0	.2	21.7	0.0	0.0	2.0
6	5.1	0.0	.2	19.5	0.0	0.0	3.0
7	4.7	0.0	.2	25.0	0.0	0.0	1.0
8	5.6	0.0	.2	19.0	0.0	0.0	1.0
9	4.6	0.0	.1	13.4	0.0	0.0	1.0
10	5.2	0.0	.2	22.0	0.0	0.0	1.0
11	5.4	0.0	.2	23.1	0.0	0.0	1.0
12	5.6	0.0	.2	14.5	0.0	0.0	1.0
13	5.7	0.0	.2	16.5	0.0	0.0	1.0
14	5.0	0.0	.2	16.5	0.0	0.0	1.0
15	5.2	0.0	.2	15.7	0.0	0.0	1.0
16	5.2	0.0	.2	15.2	0.0	0.0	1.0
17	5.5	0.0	.2	18.4	0.0	0.0	2.0
18	5.7	0.0	.3	25.0	0.0	0.0	1.0
19	5.4	0.0	.2	23.6	0.0	0.0	1.0
20	5.1	0.0	.2	20.0	0.0	0.0	2.0
MEAN	5.3	0.0	.2	19.3	0.0	0.0	1.4
STD DEV	.3	0.0	.0	3.7	0.0	0.0	.7

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII   STUDY AREA UPPER GOV   DATE 17 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT	
1	5.6	0.0	.2	15.0	0.0	0.0	2.0	
2	5.6	0.0	.3	24.6	0.0	0.0	1.0	
3	5.5	0.0	.3	23.1	0.0	0.0	2.0	
4	5.6	0.0	.2	14.0	0.0	0.0	3.0	
5	5.4	0.0	.3	22.9	0.0	0.0	2.0	
6	5.2	0.0	.2	19.7	0.0	0.0	3.0	
7	4.9	0.0	.3	21.4	0.0	0.0	3.0	NEW PLANT
8	5.7	0.0	.3	16.9	0.0	0.0	1.0	NEW PLANT
9	4.6	0.0	.3	15.1	0.0	0.0	1.0	
10	5.4	0.0	.3	22.0	0.0	0.0	1.0	
11	5.6	0.0	.2	23.9	0.0	0.0	1.0	
12	5.7	0.0	.2	14.7	0.0	0.0	1.0	
13	5.8	0.0	.3	16.7	0.0	0.0	1.0	
14	5.0	0.0	.2	16.8	0.0	0.0	1.0	
15	5.3	0.0	.2	16.1	0.0	0.0	1.0	
16	5.4	0.0	.2	17.1	0.0	0.0	1.0	
17	5.6	0.0	.2	18.5	0.0	0.0	2.0	
18	5.8	0.0	.3	25.1	0.0	0.0	1.0	
19	5.7	0.0	.3	24.1	0.0	0.0	1.0	
20	5.7	0.0	.3	23.5	0.0	0.0	3.0	
MEAN	5.5	0.0	.3	19.6	0.0	0.0	1.6	
STD DEV	.3	0.0	.1	3.8	0.0	0.0	.8	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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    AGROPYRON SMITHII    STUDY AREA  UPPER GOV           DATE 30    JUNE    1981
  -----------------------               ----------             ------------------

           PLANT  PHENOLOGICAL  MAX.    MAX.    MAX.    NOS.   NOS.
            NO.   STAGE  SCORE  LEAF    LEAF    SPIKE   SPK/   VEG.
                  VEG.   REPR.  WIDTH   HGHT.   HGHT.   CULM   PLANT
*******************************************************************************
             1    5.9    0.0    0.0     14.6    0.0     0.0    0.0
             2    6.0    0.0    0.0     23.0    0.0     0.0    0.0
             3    6.0    0.0    0.0     22.3    0.0     0.0    0.0
             4    6.0    0.0    0.0     20.0    0.0     0.0    0.0
             5    6.0    0.0    0.0     21.7    0.0     0.0    0.0
             6    6.0    0.0    0.0     13.8    0.0     0.0    0.0
             7    5.9    0.0    0.0     31.0    0.0     0.0    0.0
             8    6.0    0.0    0.0     18.4    0.0     0.0    0.0
             9    6.0    0.0    0.0     13.5    0.0     0.0    0.0
            10    6.0    0.0    0.0     22.1    0.0     0.0    0.0
            11    6.0    0.0    0.0     21.0    0.0     0.0    0.0
            12    5.9    0.0    0.0     20.5    0.0     0.0    0.0
            13    6.0    0.0    0.0     16.0    0.0     0.0    0.0
            14    6.0    0.0    0.0     19.0    0.0     0.0    0.0
            15    5.9    0.0    0.0     15.0    0.0     0.0    0.0
            16    6.1    0.0    0.0     17.0    0.0     0.0    0.0
            17    6.0    0.0    0.0     17.8    0.0     0.0    0.0
            18    5.9    0.0    0.0     20.4    0.0     0.0    0.0
            19    6.0    0.0    0.0     17.8    0.0     0.0    0.0
            20    6.2    0.0    0.0     19.0    0.0     0.0    0.0

        MEAN      6.0    0.0    0.0     19.2    0.0     0.0    0.0

      STD DEV      .1    0.0    0.0      4.0    0.0     0.0    0.0

      0.0 = NOT RECORDED

      MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII STUDY AREA UPPER GOV DATE 13 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT	
1	6.0	0.0	.1	14.7	0.0	0.0	1.0	
2	6.2	0.0	.1	19.1	0.0	0.0	1.0	
3	6.1	0.0	.1	18.1	0.0	0.0	2.0	
4	6.3	0.0	.1	16.3	0.0	0.0	1.0	
5	6.1	0.0	.1	15.6	0.0	0.0	0.0	
6	6.1	0.0	.1	19.0	0.0	0.0	2.0	
7	5.8	0.0	.1	32.8	0.0	0.0	1.0	NEW PLANT
8	6.3	0.0	.1	10.2	0.0	0.0	1.0	
9	6.1	0.0	.1	19.6	0.0	0.0	1.0	
10	6.3	0.0	.1	21.6	0.0	0.0	1.0	
11	6.0	0.0	.2	24.2	0.0	0.0	1.0	
12	6.8	0.0	.1	14.2	0.0	0.0	1.0	
13	6.4	0.0	.1	16.6	0.0	0.0	1.0	
14	6.6	0.0	.1	14.5	0.0	0.0	1.0	
15	6.1	0.0	.1	15.8	0.0	0.0	1.0	
16	6.4	0.0	.1	14.6	0.0	0.0	1.0	
17	6.2	0.0	.1	17.9	0.0	0.0	2.0	
18	6.1	0.0	.1	24.5	0.0	0.0	1.0	
19	6.1	0.0	.1	24.5	0.0	0.0	1.0	NEW PLANT
20	6.3	0.0	.1	25.6	0.0	0.0	2.0	
MEAN	6.2	0.0	.1	19.0	0.0	0.0	1.2	
STD DEV	.2	0.0	.0	5.3	0.0	0.0	.4	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII   STUDY AREA UPPER GOV   DATE 31 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.5	0.0	.1	18.8	0.0	0.0	0.0
2	6.5	0.0	.2	30.9	0.0	0.0	0.0
3	6.4	0.0	.1	18.0	0.0	0.0	0.0
4	6.8	0.0	.2	22.0	0.0	0.0	0.0
5	6.6	0.0	.2	17.7	0.0	0.0	0.0
6	6.8	0.0	.1	15.2	0.0	0.0	0.0
7	6.4	0.0	.2	31.2	0.0	0.0	0.0
8	6.7	0.0	.2	17.0	0.0	0.0	0.0
9	6.4	0.0	.2	18.7	0.0	0.0	0.0
10	6.8	0.0	.2	21.2	0.0	0.0	0.0
11	6.4	0.0	.2	23.0	0.0	0.0	0.0
12	6.8	0.0	.1	15.0	0.0	0.0	0.0
13	6.5	0.0	.2	16.8	0.0	0.0	0.0
14	6.6	0.0	.1	19.0	0.0	0.0	0.0
15	6.8	0.0	.2	15.5	0.0	0.0	0.0
16	6.9	0.0	.2	17.0	0.0	0.0	0.0
17	6.6	0.0	.2	18.0	0.0	0.0	0.0
18	6.8	0.0	.1	19.0	0.0	0.0	0.0
19	6.4	0.0	.2	24.0	0.0	0.0	0.0
20	6.8	0.0	.2	23.0	0.0	0.0	0.0
MEAN	6.6	0.0	.2	20.1	0.0	0.0	0.0
STD DEV	.2	0.0	.0	4.6	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA UPPER GUV DATE 10 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.8	0.0	.1	17.5	0.0	0.0	0.0
2	6.8	0.0	.1	16.5	0.0	0.0	0.0
3	6.7	0.0	.1	23.1	0.0	0.0	0.0
4	6.9	0.0	.1	13.0	0.0	0.0	0.0
5	6.9	0.0	.1	14.5	0.0	0.0	0.0
6	6.8	0.0	.1	13.3	0.0	0.0	0.0
7	6.9	0.0	.1	26.8	0.0	0.0	0.0
8	6.8	0.0	.1	10.5	0.0	0.0	0.0
9	6.5	0.0	.1	18.6	0.0	0.0	0.0
10	6.7	0.0	.1	20.5	0.0	0.0	0.0
11	6.6	0.0	.1	23.0	0.0	0.0	0.0
12	6.9	0.0	.1	14.0	0.0	0.0	0.0
13	6.0	0.0	.1	9.3	0.0	0.0	0.0
14	6.9	0.0	.1	16.0	0.0	0.0	0.0
15	6.9	0.0	.1	16.2	0.0	0.0	0.0
16	6.9	0.0	.1	14.0	0.0	0.0	0.0
17	6.9	0.0	.1	15.0	0.0	0.0	0.0
18	6.8	0.0	.1	24.5	0.0	0.0	0.0
19	6.7	0.0	.1	23.5	0.0	0.0	0.0
20	6.8	0.0	.1	23.5	0.0	0.0	0.0
MEAN	6.8	0.0	.1	17.7	0.0	0.0	0.0
STD DEV	.2	0.0	.0	5.0	0.0	0.0	0.0

REPRODUCTIVE CULMS VERY SPARSE

CLIPPED CULMS:

VEG	REPR	LFHT	SPHT
6.9	15.0	28.0	33.3
6.9	15.2	22.0	27.0
6.9	15.5	23.0	35.8
6.8	15.8	31.5	33.7
6.8	16.1	15.6	18.5
6.8	16.0	19.0	28.0
6.4	15.8	18.5	27.0
6.9	15.8	26.0	30.5
6.9	15.8	21.5	17.0
6.9	15.5	18.5	26.5

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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AGROPYRON SMITHII     STUDY AREA   UPPER GOV            DATE 24    AUGUST 1981
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        PLANT  PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
         NO.   STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
               VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
***************************************************************************
          1     6.9    0.0     0.0    20.4     0.0    0.0     0.0
          2     6.8    0.0     0.0    19.5     0.0    0.0     0.0
          3     6.7    0.0     0.0    22.6     0.0    0.0     0.0
          4     6.9    0.0     0.0    23.7     0.0    0.0     0.0
          5     6.8    0.0     0.0    16.0     0.0    0.0     0.0
          6     6.8    0.0     0.0    15.0     0.0    0.0     0.0
          7     6.9    0.0     0.0    23.0     0.0    0.0     0.0
          8     6.9    0.0     0.0    10.6     0.0    0.0     0.0
          9     6.5    0.0     0.0    15.8     0.0    0.0     0.0
         10     6.7    0.0     0.0    22.0     0.0    0.0     0.0
         11     6.6    0.0     0.0    24.5     0.0    0.0     0.0
         12     6.9    0.0     0.0    15.4     0.0    0.0     0.0
         13     6.5    0.0     0.0    25.2     0.0    0.0     0.0
         14     6.9    0.0     0.0    24.4     0.0    0.0     0.0
         15     6.9    0.0     0.0    15.7     0.0    0.0     0.0
         16     6.9    0.0     0.0    15.4     0.0    0.0     0.0
         17     6.9    0.0     0.0    16.1     0.0    0.0     0.0
         18     6.8    0.0     0.0    18.9     0.0    0.0     0.0
         19     6.7    0.0     0.0    24.3     0.0    0.0     0.0
         20     6.9    0.0     0.0    25.6     0.0    0.0     0.0

      MEAN      6.8    0.0     0.0    19.7     0.0    0.0     0.0

   STD DEV       .1    0.0     0.0     4.4     0.0    0.0     0.0

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
   AGROPYRON SMITHII    STUDY AREA  UPPER GOV          DATE 11   SEPT   1981
  --------------------             ----------              ------------------

       PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
        NO.    STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
               VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
*****************************************************************************
         1     7.0    0.0     0.0     0.0     0.0     0.0    0.0
         2     7.1    0.0     0.0     0.0     0.0     0.0    0.0
         3     6.9    0.0     0.0     0.0     0.0     0.0    0.0
         4     7.0    0.0     0.0     0.0     0.0     0.0    0.0
         5     7.0    0.0     0.0     0.0     0.0     0.0    0.0
         6     7.0    0.0     0.0     0.0     0.0     0.0    0.0
         7     7.1    0.0     0.0     0.0     0.0     0.0    0.0
         8     7.0    0.0     0.0     0.0     0.0     0.0    0.0
         9     7.0    0.0     0.0     0.0     0.0     0.0    0.0
        10     6.8    0.0     0.0     0.0     0.0     0.0    0.0
        11     7.0    0.0     0.0     0.0     0.0     0.0    0.0
        12     7.0    0.0     0.0     0.0     0.0     0.0    0.0
        13     7.0    0.0     0.0     0.0     0.0     0.0    0.0
        14     6.9    0.0     0.0     0.0     0.0     0.0    0.0
        15     7.1    0.0     0.0     0.0     0.0     0.0    0.0
        16     7.1    0.0     0.0     0.0     0.0     0.0    0.0
        17     7.0    0.0     0.0     0.0     0.0     0.0    0.0
        18     7.0    0.0     0.0     0.0     0.0     0.0    0.0
        19     6.9    0.0     0.0     0.0     0.0     0.0    0.0
        20     7.2    0.0     0.0     0.0     0.0     0.0    0.0


    MEAN       7.0    0.0     0.0     0.0     0.0     0.0    0.0

  STD DEV       .1    0.0     0.0     0.0     0.0     0.0    0.0


  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SPICATUM   STUDY AREA BUD KIMBAL   DATE 19 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	PHENOLOGICAL SCORE REPR.	CLUMP LGTH.	CLUMP WIDTH	CLUMP DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	5.3	9.0	6.0	6.0	0.0	.2	31.0	0.0	0.	10.	25.
2	5.1	9.0	8.0	5.0	0.0	.2	24.5	0.0	0.	5.	35.
3	4.7	0.0	7.0	0.0	0.0	.2	25.0	0.0	0.	0.	20.
4	5.3	0.0	25.0	25.0	0.0	.3	37.5	0.0	0.	0.	250.
5	4.9	9.0	4.0	6.0	0.0	.2	20.2	0.0	0.	5.	25.
6	4.5	0.0	34.0	15.0	0.0	.3	33.0	0.0	0.	0.	200.
7	4.9	9.0	14.0	7.0	0.0	.2	31.2	0.0	0.	0.	30.
8	5.3	0.0	4.0	3.0	0.0	.2	21.4	0.0	0.	0.	20.
9	5.1	0.0	2.0	1.0	0.0	.3	22.9	0.0	0.	0.	10.
10	5.4	0.0	26.0	20.0	0.0	.2	28.0	0.0	0.	0.	100.
11	5.3	0.0	35.0	15.0	0.0	.2	29.0	0.0	0.	0.	300.
12	5.2	0.0	23.0	11.0	0.0	.2	32.0	0.0	0.	0.	150.
13	4.9	0.0	13.0	12.0	0.0	.3	29.0	0.0	0.	0.	80.
14	4.8	0.0	9.0	8.0	0.0	.3	27.0	0.0	0.	0.	45.
15	5.1	0.0	5.0	3.0	0.0	.3	22.5	0.0	0.	0.	20.
16	4.9	0.0	.3	.3	0.0	.3	18.0	0.0	0.	0.	6.
17	4.7	0.0	2.0	2.0	0.0	.3	25.3	0.0	0.	0.	12.
18	5.2	0.0	18.0	12.0	0.0	.3	28.0	0.0	0.	0.	40.
19	5.3	0.0	6.0	6.0	0.0	.3	28.0	0.0	0.	0.	20.
20	4.9	0.0	14.0	5.0	0.0	.3	29.8	0.0	0.	0.	40.
MEAN	5.0	9.0	12.8	8.5	0.0	.3	27.2	0.0	0.	7.	71.
STD DEV	.3	0.0	10.7	6.6	0.0	.1	4.8	0.0	0.	3.	86.

0.0 = NOT RECORDED

AGROPYRON SPICATUM   STUDY AREA BUD KIMBAL   DATE 02 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM	
1	5.5	9.6	0.0	0.0	0.0	0.0	42.0	0.0	0.	0.	0.	
2	5.3	9.5	0.0	0.0	0.0	0.0	35.8	0.0	0.	0.	0.	
3	4.9	9.0	0.0	0.0	0.0	0.0	32.2	0.0	0.	0.	0.	
4	4.7	9.0	0.0	0.0	0.0	0.0	33.5	0.0	0.	0.	0.	
5	5.0	9.9	0.0	0.0	0.0	0.0	30.5	0.0	0.	0.	0.	
6	5.5	10.6	0.0	0.0	0.0	0.0	38.2	0.0	0.	0.	0.	
7	5.0	9.3	0.0	0.0	0.0	0.0	34.0	0.0	0.	0.	0.	
8	5.4	0.0	0.0	0.0	0.0	0.0	22.8	0.0	0.	0.	0.	
9	5.3	0.0	0.0	0.0	0.0	0.0	35.0	0.0	0.	0.	0.	
10	5.6	0.0	0.0	0.0	0.0	0.0	31.2	0.0	0.	0.	0.	
11	5.5	9.2	0.0	0.0	0.0	0.0	36.6	0.0	0.	0.	0.	
12	5.4	0.0	0.0	0.0	0.0	0.0	33.5	0.0	0.	0.	0.	
13	5.2	0.0	0.0	0.0	0.0	0.0	38.8	0.0	0.	0.	0.	
14	5.3	0.0	0.0	0.0	0.0	0.0	31.7	0.0	0.	0.	0.	
15	5.6	9.5	0.0	0.0	0.0	0.0	31.6	0.0	0.	0.	0.	
16	5.3	0.0	0.0	0.0	0.0	0.0	23.3	0.0	0.	0.	0.	
17	4.8	0.0	0.0	0.0	0.0	0.0	13.5	0.0	0.	0.	0.	NEW PLANT
18	5.6	0.0	0.0	0.0	0.0	0.0	29.2	0.0	0.	0.	0.	
19	5.7	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.	0.	0.	
20	5.0	0.0	0.0	0.0	0.0	0.0	30.2	0.0	0.	0.	0.	
MEAN	5.3	9.5	0.0	0.0	0.0	0.0	31.7	0.0	0.	0.	0.	
STD DEV	.3	.5	0.0	0.0	0.0	0.0	6.3	0.0	0.	0.	0.	

0.0 = NOT RECORDED

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     AGROPYRON SPICATUM   STUDY AREA BUD KIMBAL          DATE 17   JUNE    1981
     ------------------               -----------             ------------------

 PLANT  PHENOLOGICAL            CLUMP              MAX.  MAX.   MAX.   NO.    NO.    NO.
  NO.   STAGE  SCORE    LGTH.   WIDTH     DIAM.   LEAF  LEAF    SPK    SPL/   REPR   VEG
        VEG.   REPR.                              WIDTH  HGHT   HGHT   CULM   CULM   CULM
*******************************************************************************************
   1    5.9     0.0      0.0     0.0       0.0     .3   21.2    0.0   0.     0.     0.   NEW PLANT
   2    5.9     0.0      0.0     0.0       0.0     .3   23.6    0.0   0.     0.     0.   NEW PLANT
   3    6.0     0.0      0.0     0.0       0.0     .2   13.5    0.0   0.     0.     0.   NEW PLANT
   4    6.2    11.5      0.0     0.0       0.0     .3   45.0   60.0   7.     0.     0.
   5    6.3    11.0      0.0     0.0       0.0     .3   31.0   44.0   6.     0.     0.
   6    6.1    11.0      0.0     0.0       0.0     .3   40.0   39.0   6.     0.     0.
   7    6.0    11.3      0.0     0.0       0.0     .4   35.0   45.0   7.     0.     0.
   8    6.0     0.0      0.0     0.0       0.0     .3   23.0    0.0   0.     0.     0.
   9    5.9     0.0      0.0     0.0       0.0     .3   32.0    0.0   0.     0.     0.
  10    6.0     0.0      0.0     0.0       0.0     .4   31.0    0.0   0.     0.     0.
  11    6.0    10.9      0.0     0.0       0.0     .4   45.0   51.2   6.     0.     0.
  12    6.0     0.0      0.0     0.0       0.0     .4   56.0    0.0   0.     0.     0.
  13    6.0    10.9      0.0     0.0       0.0     .4   43.0   53.0   6.     0.     0.
  14    5.9    10.9      0.0     0.0       0.0     .4   49.0   53.0   7.     0.     0.
  15    5.9     0.0      0.0     0.0       0.0     .4   35.5    0.0   0.     0.     0.
  16    5.9     0.0      0.0     0.0       0.0     .3   23.7    0.0   0.     0.     0.
  17    5.3     0.0      0.0     0.0       0.0     .4   31.5    0.0   0.     0.     0.
  18    5.9     0.0      0.0     0.0       0.0     .3   32.0    0.0   0.     0.     0.
  19    5.9     0.0      0.0     0.0       0.0     .4   34.5    0.0   0.     0.     0.
  20    6.0     0.0      0.0     0.0       0.0     .4   29.0    0.0   0.     0.     0.

 MEAN   6.0    11.1      0.0     0.0       0.0     .3   33.7   49.3   6.     0.     0.

STD DEV  .2      .2      0.0     0.0       0.0     .1   10.4    7.0   1.     0.     0.

0.0 = NOT RECORDED
```

AGROPYRON SPICATUM STUDY AREA BUD KIMBAL DATE 29 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	6.0	0.0	0.0	0.0	0.0	0.0	22.0	0.0	0.	0.	0.
2	6.1	0.0	0.0	0.0	0.0	0.0	19.6	0.0	0.	0.	0.
3	6.0	0.0	0.0	0.0	0.0	0.0	13.4	0.0	0.	0.	0.
4	6.3	16.0	0.0	0.0	0.0	0.0	27.6	57.0	0.	0.	0.
5	6.3	16.0	0.0	0.0	0.0	0.0	27.0	45.0	0.	0.	0.
6	6.1	16.0	0.0	0.0	0.0	0.0	33.0	39.5	0.	0.	0.
7	6.2	16.0	0.0	0.0	0.0	0.0	33.0	42.0	0.	0.	0.
8	6.0	0.0	0.0	0.0	0.0	0.0	23.2	0.0	0.	0.	0.
9	5.9	0.0	0.0	0.0	0.0	0.0	16.5	0.0	0.	0.	0.
10	6.0	0.0	0.0	0.0	0.0	0.0	29.0	0.0	0.	0.	0.
11	6.0	16.0	0.0	0.0	0.0	0.0	46.0	58.0	0.	0.	0.
12	6.0	0.0	0.0	0.0	0.0	0.0	34.0	0.0	0.	0.	0.
13	6.0	16.0	0.0	0.0	0.0	0.0	35.0	50.0	0.	0.	0.
14	5.9	0.0	0.0	0.0	0.0	0.0	32.0	0.0	0.	0.	0.
15	5.9	0.0	0.0	0.0	0.0	0.0	26.0	0.0	0.	0.	0.
16	5.9	0.0	0.0	0.0	0.0	0.0	20.5	0.0	0.	0.	0.
17	6.0	0.0	0.0	0.0	0.0	0.0	39.0	0.0	0.	0.	0.
18	5.9	16.7	0.0	0.0	0.0	0.0	28.0	35.0	0.	0.	0.
19	5.9	0.0	0.0	0.0	0.0	0.0	47.0	0.0	0.	0.	0.
20	6.2	0.0	0.0	0.0	0.0	0.0	32.0	0.0	0.	0.	0.
MEAN	6.0	16.1	0.0	0.0	0.0	0.0	29.2	46.6	0.	0.	0.
STD DEV	.1	.3	0.0	0.0	0.0	0.0	8.8	8.7	0.	0.	0.

0.0 = NOT RECORDED

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      AGROPYRON SPICATUM     STUDY AREA BUD KIMBAL          DATE 14    JULY     1981
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PLANT  PHENOLOGICAL         CLUMP               MAX.  MAX.   MAX.   NO.    NO.    NO.
 NO.   STAGE SCORE   LGTH.  WIDTH     DIAM. LEAF   LEAF   SPK    SPL/   REPR   VEG
       VEG.  REPR.                          WIDTH  HGHT   HGHT   CULM   CULM   CULM
*************************************************************************************
  1     6.3    0.0    0.0    0.0      0.0   0.0    22.0    0.0   0.     0.      2.
  2     6.5    0.0    0.0    0.0      0.0   0.0    19.0    0.0   0.     0.      1.
  3     6.5    0.0    0.0    0.0      0.0   0.0     8.3    0.0   0.     0.      1.
  4     6.5   16.1    0.0    0.0      0.0   0.0    41.3   54.7   0.    18.    100.
  5     6.5   16.1    0.0    0.0      0.0   0.0    29.6   42.0   0.     4.     40.
  6     6.4   16.1    0.0    0.0      0.0   0.0    30.5   37.0   0.     1.    100.
  7     6.4   16.1    0.0    0.0      0.0   0.0    36.0   51.0   0.     2.     70.
  8     6.4    0.0    0.0    0.0      0.0   0.0    23.1    0.0   0.     0.     20.
  9     6.5    0.0    0.0    0.0      0.0   0.0    38.6    0.0   0.     0.    200.
 10     6.5    0.0    0.0    0.0      0.0   0.0    32.6    0.0   0.     0.    100.
 11     6.5   16.1    0.0    0.0      0.0   0.0    41.2   55.5   0.     4.    150.
 12     6.5   16.1    0.0    0.0      0.0   0.0    27.7   47.2   0.     1.    300.
 13     6.5   16.1    0.0    0.0      0.0   0.0    31.0   55.3   0.     3.    400.
 14     6.5    0.0    0.0    0.0      0.0   0.0    28.1    0.0   0.     0.     40.
 15     6.5   16.1    0.0    0.0      0.0   0.0    31.0   40.0   0.     3.     75.
 16     6.4    0.0    0.0    0.0      0.0   0.0    25.5    0.0   0.     0.     20.
 17     6.2    0.0    0.0    0.0      0.0   0.0    35.1    0.0   0.     0.     20.
 18     6.3    0.0    0.0    0.0      0.0   0.0    30.6    0.0   0.     0.     15.
 19     6.2    0.0    0.0    0.0      0.0   0.0    33.2    0.0   0.     0.     50.
 20     6.4    0.0    0.0    0.0      0.0   0.0    27.6    0.0   0.     0.     40.


MEAN    6.4   16.1    0.0    0.0      0.0   0.0    29.6   47.8   0.     5.     87.

STD DEV  .1     .0    0.0    0.0      0.0   0.0     7.8    7.4   0.     6.    105.

0.0 = NOT RECORDED
```

AGROPYRON SPICATUM STUDY AREA BUD KIMBAL DATE 28 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	6.5	0.0	0.0	0.0	0.0	0.0	21.6	0.0	0.	0.	0.
2	6.5	0.0	0.0	0.0	0.0	0.0	16.2	0.0	0.	0.	0.
3	6.9	0.0	0.0	0.0	0.0	0.0	18.0	0.0	0.	0.	0.
4	6.3	16.3	0.0	0.0	0.0	0.0	28.6	53.0	0.	0.	0.
5	6.4	16.4	0.0	0.0	0.0	0.0	28.7	41.1	0.	0.	0.
6	6.4	16.2	0.0	0.0	0.0	0.0	29.0	35.6	0.	0.	0.
7	6.4	16.1	0.0	0.0	0.0	0.0	24.5	44.9	0.	0.	0.
8	6.2	0.0	0.0	0.0	0.0	0.0	23.2	0.0	0.	0.	0.
9	6.3	0.0	0.0	0.0	0.0	0.0	31.4	0.0	0.	0.	0.
10	6.2	0.0	0.0	0.0	0.0	0.0	28.1	0.0	0.	0.	0.
11	6.3	16.5	0.0	0.0	0.0	0.0	29.3	55.8	0.	0.	0.
12	6.3	0.0	0.0	0.0	0.0	0.0	39.2	0.0	0.	0.	0.
13	6.3	16.3	0.0	0.0	0.0	0.0	35.2	49.7	0.	0.	0.
14	6.2	16.5	0.0	0.0	0.0	0.0	23.1	44.1	0.	0.	0.
15	6.4	16.3	0.0	0.0	0.0	0.0	31.5	51.0	0.	0.	0.
16	6.2	0.0	0.0	0.0	0.0	0.0	24.6	0.0	0.	0.	0.
17	6.2	0.0	0.0	0.0	0.0	0.0	29.3	0.0	0.	0.	0.
18	6.5	16.4	0.0	0.0	0.0	0.0	32.3	38.0	0.	0.	0.
19	6.3	0.0	0.0	0.0	0.0	0.0	34.0	0.0	0.	0.	0.
20	6.5	0.0	0.0	0.0	0.0	0.0	27.8	0.0	0.	0.	0.
MEAN	6.4	16.3	0.0	0.0	0.0	0.0	27.8	45.9	0.	0.	0.
STD DEV	.2	.1	0.0	0.0	0.0	0.0	5.7	6.9	0.	0.	0.

0.0 = NOT RECORDED

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    AGROPYRON SPICATUM    STUDY AREA BUD KIMBAL          DATE 11   AUGUST  1981
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 PLANT  PHENOLOGICAL          CLUMP                MAX.  MAX.   MAX.   NO.    NO.    NO.
  NO.   STAGE SCORE   LGTH.   WIDTH    DIAM.  LEAF   LEAF   SPK    SPL/   REPR   VEG
        VEG.  REPR.                           WIDTH  HGHT   HGHT   CULM   CULM   CULM
**************************************************************************************
   1     5.8   0.0     0.0     0.0     0.0     .1    21.5    0.0   0.     0.     0.
   2     6.9   0.0     0.0     0.0     0.0     .1    13.0    0.0   0.     0.     0.
   3     6.8   0.0     0.0     0.0     0.0     .1    11.8    0.0   0.     0.     0.
   4     6.3  16.4     0.0     0.0     0.0     .1    32.0   53.0   0.     0.     0.
   5     6.5  16.5     0.0     0.0     0.0     .2    29.0   42.0   0.     0.     0.
   6     6.2  16.5     0.0     0.0     0.0     .2    32.0   37.0   0.     0.     0.
   7     6.4  16.2     0.0     0.0     0.0     .1    34.0   34.0   0.     0.     0.   5 - 15% USE
   8     6.5   0.0     0.0     0.0     0.0     .1    23.0    0.0   0.     0.     0.   MOSTLY BY
   9     6.5   0.0     0.0     0.0     0.0     .1    26.0    0.0   0.     0.     0.   GRASSHOPPERS
  10     6.3   0.0     0.0     0.0     0.0     .1    31.0    0.0   0.     0.     0.
  11     6.3  16.7     0.0     0.0     0.0     .1    33.0   58.0   0.     0.     0.
  12     6.4   0.0     0.0     0.0     0.0     .1    29.0    0.0   0.     0.     0.
  13     6.4  16.3     0.0     0.0     0.0     .1    38.0   51.0   0.     0.     0.
  14     6.3  16.5     0.0     0.0     0.0     .1    27.0   46.0   0.     0.     0.
  15     6.6   0.0     0.0     0.0     0.0     .1    20.5    0.0   0.     0.     0.
  16     6.5   0.0     0.0     0.0     0.0     .1    23.0    0.0   0.     0.     0.
  17     6.4  16.4     0.0     0.0     0.0     .1    33.0   49.0   0.     0.     0.
  18     6.4  16.5     0.0     0.0     0.0     .1    31.0   37.0   0.     0.     0.
  19     6.3   0.0     0.0     0.0     0.0     .1    38.0    0.0   0.     0.     0.
  20     6.3   0.0     0.0     0.0     0.0     .1    28.5    0.0   0.     0.     0.


 MEAN    6.4  16.4     0.0     0.0     0.0     .1    27.7   45.2   0.     0.     0.

STD DEV   .2    .1     0.0     0.0     0.0     .0     7.2    8.2   0.     0.     0.

0.0 = NOT RECORDED
```

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  AGROPYRON SPICATUM   STUDY AREA BUD KIMBAL            DATE 25   AUGUST  1981
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                                                      MAX.  MAX.   MAX.   NO.    NO.    NO.
 PLANT  PHENOLOGICAL           CLUMP                  LEAF  LEAF   SPK    SPL/   REPR   VEG
  NO.   STAGE SCORE    LGTH.   WIDTH      DIAM.   LEAF   LEAF   SPK    SPL/   REPR   VEG
        VEG.   REPR.                              WIDTH  HGHT   HGHT   CULM   CULM   CULM
*******************************************************************************************
   1     6.7    16.9    0.0     0.0       0.0   0.0     0.0     0.0   0.     0.     0.
   2     6.7    16.9    0.0     0.0       0.0   0.0     0.0     0.0   0.     0.     0.
   3     6.7    16.9    0.0     0.0       0.0   0.0     0.0     0.0   0.     0.     0.
   4     6.7    16.9    0.0     0.0       0.0   0.0     0.0     0.0   0.     0.     0.
   5     6.7    16.9    0.0     0.0       0.0   0.0     0.0     0.0   0.     0.     0.
   6     6.7    16.9    0.0     0.0       0.0   0.0     0.0     0.0   0.     0.     0.
   7     6.7    16.9    0.0     0.0       0.0   0.0     0.0     0.0   0.     0.     0.
   8     6.7    16.9    0.0     0.0       0.0   0.0     0.0     0.0   0.     0.     0.
   9     6.7    16.9    0.0     0.0       0.0   0.0     0.0     0.0   0.     0.     0.
  10     6.7    16.9    0.0     0.0       0.0   0.0     0.0     0.0   0.     0.     0.
  11     6.7    16.9    0.0     0.0       0.0   0.0     0.0     0.0   0.     0.     0.
  12     6.7    16.9    0.0     0.0       0.0   0.0     0.0     0.0   0.     0.     0.
  13     6.7    16.9    0.0     0.0       0.0   0.0     0.0     0.0   0.     0.     0.
  14     6.7    16.9    0.0     0.0       0.0   0.0     0.0     0.0   0.     0.     0.
  15     6.7    16.9    0.0     0.0       0.0   0.0     0.0     0.0   0.     0.     0.
  16     6.9    16.9    0.0     0.0       0.0   0.0     0.0     0.0   0.     0.     0.
  17     6.7    16.9    0.0     0.0       0.0   0.0     0.0     0.0   0.     0.     0.
  18     6.7    16.9    0.0     0.0       0.0   0.0     0.0     0.0   0.     0.     0.
  19     6.7    16.9    0.0     0.0       0.0   0.0     0.0     0.0   0.     0.     0.
  20     6.7    16.9    0.0     0.0       0.0   0.0     0.0     0.0   0.     0.     0.

 MEAN    6.7    16.9    0.0     0.0       0.0   0.0     0.0     0.0   0.     0.     0.

STD DEV   .0      .0    0.0     0.0       0.0   0.0     0.0     0.0   0.     0.     0.

0.0 = NOT RECORDED
```

AGROPYRON SPICATUM   STUDY AREA BUD KIMBAL   DATE 12 SEPT 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
2	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
3	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
4	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
5	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
6	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
7	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
8	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
9	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
10	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
11	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
12	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
13	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
14	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
15	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
16	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
17	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
18	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
19	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
20	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
MEAN	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
STD DEV	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.

0.0 = NOT RECORDED

AGROPYRON SPICATUM STUDY AREA CEDAR MTN DATE 01 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	PHENOLOGICAL SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	4.7	0.0	7.0	5.0	0.0	.2	12.3	0.0	0.	0.	0.
2	4.6	0.0	33.0	22.0	0.0	.1	9.1	0.0	0.	0.	0.
3	4.5	0.0	9.0	6.0	0.0	.2	13.8	0.0	0.	0.	0.
4	4.6	0.0	28.0	16.0	0.0	.2	16.5	0.0	0.	0.	0.
5	4.9	0.0	2.5	1.0	0.0	.2	12.1	0.0	0.	0.	0.
6	4.6	0.0	45.0	33.0	0.0	.2	11.1	0.0	0.	0.	0.
7	4.4	0.0	34.0	23.0	0.0	.2	19.2	0.0	0.	0.	0.
8	4.9	0.0	38.0	26.0	0.0	.2	18.1	0.0	0.	0.	0.
9	4.8	0.0	9.0	7.0	0.0	.2	9.2	0.0	0.	0.	0.
10	4.7	0.0	10.0	3.0	0.0	.2	9.6	0.0	0.	0.	0.
11	4.8	0.0	13.0	8.0	0.0	.2	17.1	0.0	0.	0.	0.
12	4.2	0.0	9.0	8.0	0.0	.1	6.3	0.0	0.	0.	0.
13	4.7	0.0	51.0	24.0	0.0	.2	14.2	0.0	0.	0.	0.
14	4.8	0.0	19.0	15.0	0.0	.2	17.1	0.0	0.	0.	0.
15	4.9	0.0	5.0	4.0	0.0	.2	13.9	0.0	0.	0.	0.
16	4.9	0.0	32.0	17.0	0.0	.2	15.6	0.0	0.	0.	0.
17	4.7	0.0	36.0	13.0	0.0	.2	16.5	0.0	0.	0.	0.
18	4.5	0.0	33.0	8.0	0.0	.1	11.1	0.0	0.	0.	0.
19	4.9	0.0	16.0	11.0	0.0	.2	19.2	0.0	0.	0.	0.
20	4.9	0.0	39.0	20.0	0.0	.3	21.5	0.0	0.	0.	0.
MEAN	4.7	0.0	23.4	13.5	0.0	.2	14.2	0.0	0.	0.	0.
STD DEV	.2	0.0	15.0	8.9	0.0	.0	4.0	0.0	0.	0.	0.

0.0 = NOT RECORDED

AGROPYRON SPICATUM   STUDY AREA CEDAR MTN   DATE 27 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM	
1	5.3	0.0	8.0	3.0	0.0	.2	19.1	0.0	0.	0.	40.	
2	5.1	0.0	2.0	.5	0.0	.1	8.3	0.0	0.	0.	7.	
3	4.7	0.0	.1	.1	0.0	.2	10.2	0.0	0.	0.	1.	
4	4.9	0.0	.1	.1	0.0	.3	27.0	0.0	0.	0.	1.	
5	4.6	0.0	.1	.2	0.0	.2	12.2	0.0	0.	0.	2.	
6	5.2	0.0	45.0	22.0	0.0	.2	15.0	0.0	0.	0.	200.	80% DEAD
7	5.1	0.0	30.0	13.0	0.0	.2	17.0	0.0	0.	0.	300.	40% DEAD
8	5.1	0.0	26.0	22.0	0.0	.3	22.0	0.0	0.	0.	500.	30% DEAD
9	4.9	0.0	4.0	1.5	0.0	.2	11.5	0.0	0.	0.	20.	NEW PLANT
10	4.8	0.0	.2	.1	0.0	.2	9.0	0.0	0.	0.	2.	
11	4.9	0.0	14.0	5.0	0.0	.2	22.0	0.0	0.	0.	50.	
12	4.4	0.0	1.0	.2	0.0	.1	5.0	0.0	0.	0.	4.	NEW PLANT
13	4.9	0.0	5.0	2.0	0.0	.3	17.5	0.0	0.	0.	30.	NEW PLANT
14	4.8	0.0	4.0	2.0	0.0	.2	17.5	0.0	0.	0.	20.	
15	4.8	0.0	2.0	.2	0.0	.2	10.0	0.0	0.	0.	10.	NEW PLANT
16	5.3	0.0	26.0	9.0	0.0	.3	26.0	0.0	0.	0.	160.	
17	4.9	0.0	30.0	5.0	0.0	.2	16.0	0.0	0.	0.	200.	
18	4.8	0.0	.2	.2	0.0	.1	6.0	0.0	0.	0.	5.	
19	5.3	0.0	9.0	3.8	0.0	.3	21.0	0.0	0.	0.	60.	
20	4.8	0.0	15.0	8.0	0.0	.3	19.0	0.0	0.	0.	100.	
MEAN	4.9	0.0	11.1	4.9	0.0	.2	15.6	0.0	0.	0.	86.	
STD DEV	.2	0.0	13.3	6.8	0.0	.1	6.4	0.0	0.	0.	130.	

0.0 = NOT RECORDED

AGROPYRON SPICATUM STUDY AREA CEDAR MTN DATE 01 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	5.3	0.0	0.0	0.0	0.0	.3	19.5	0.0	0.	0.	0.
2	5.2	0.0	0.0	0.0	0.0	.3	10.1	0.0	0.	0.	0.
3	5.3	0.0	0.0	0.0	0.0	.4	14.2	0.0	0.	0.	0.
4	5.5	0.0	0.0	0.0	0.0	.4	28.1	0.0	0.	0.	0.
5	5.4	0.0	0.0	0.0	0.0	.3	15.1	0.0	0.	0.	0.
6	5.4	0.0	0.0	0.0	0.0	.3	12.9	0.0	0.	0.	0.
7	5.3	0.0	0.0	0.0	0.0	.2	12.7	0.0	0.	0.	0.
8	5.2	0.0	0.0	0.0	0.0	.3	27.6	0.0	0.	0.	0.
9	5.3	0.0	0.0	0.0	0.0	.2	13.1	0.0	0.	0.	0.
10	4.8	0.0	0.0	0.0	0.0	.2	8.0	0.0	0.	0.	0.
11	5.3	0.0	0.0	0.0	0.0	.3	18.2	0.0	0.	0.	0.
12	5.1	0.0	0.0	0.0	0.0	.2	7.4	0.0	0.	0.	0.
13	5.2	9.0	0.0	0.0	0.0	.3	19.7	0.0	0.	0.	0.
14	5.2	9.1	0.0	0.0	0.0	.4	22.8	0.0	0.	0.	0.
15	4.8	0.0	0.0	0.0	0.0	.3	19.4	0.0	0.	0.	0.
16	5.3	0.0	0.0	0.0	0.0	.3	29.2	0.0	0.	0.	0.
17	5.0	0.0	0.0	0.0	0.0	.2	17.9	0.0	0.	0.	0.
18	5.1	0.0	0.0	0.0	0.0	.3	16.0	0.0	0.	0.	0.
19	5.3	10.1	0.0	0.0	0.0	.3	26.0	0.0	0.	0.	0.
20	5.3	10.0	0.0	0.0	0.0	.4	25.8	0.0	0.	0.	0.
MEAN	5.2	9.6	0.0	0.0	0.0	.3	18.2	0.0	0.	0.	0.
STD DEV	.2	.6	0.0	0.0	0.0	.1	6.7	0.0	0.	0.	0.

0.0 = NOT RECORDED

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    AGROPYRON SPICATUM    STUDY AREA  CEDAR MTN              DATE 15   JUNE    1981
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 PLANT   PHENOLOGICAL           CLUMP               MAX.  MAX.   MAX.   NO.    NO.    NO.
  NO.    STAGE SCORE    LGTH.   WIDTH      DIAM.  LEAF   LEAF   SPK    SPL/   REPR   VEG
         VEG.  REPR.                              WIDTH  HGHT   HGHT   CULM   CULM   CULM
******************************************************************************************
   1     5.4    0.0     0.0      0.0      0.0     .3     20.4    0.0   0.     0.     0.
   2     5.3    0.0     0.0      0.0      0.0     .3     13.0    0.0   0.     0.     0.
   3     5.3    0.0     0.0      0.0      0.0     .4     14.2    0.0   0.     0.     0.
   4     5.5    0.0     0.0      0.0      0.0     .4     31.5    0.0   0.     0.     0.
   5     5.4    0.0     0.0      0.0      0.0     .2     14.2    0.0   0.     0.     0.
   6     5.4    0.0     0.0      0.0      0.0     .3     14.7    0.0   0.     0.     0.
   7     5.3    0.0     0.0      0.0      0.0     .2     12.1    0.0   0.     0.     0.
   8     5.4    0.0     0.0      0.0      0.0     .3     21.8    0.0   0.     0.     0.
   9     5.4    0.0     0.0      0.0      0.0     .3     16.6    0.0   0.     0.     0.
  10     5.4    0.0     0.0      0.0      0.0     .3     16.1    0.0   0.     0.     0.
  11     5.3    0.0     0.0      0.0      0.0     .3     23.4    0.0   0.     0.     0.
  12     5.1    0.0     0.0      0.0      0.0     .2      8.0    0.0   0.     0.     0.
  13     5.3    9.8     0.0      0.0      0.0     .2     17.2    0.0   0.     3.     0.
  14     5.3   10.0     0.0      0.0      0.0     .2     15.4    0.0   0.     3.     0.
  15     5.2    0.0     0.0      0.0      0.0     .3     20.2    0.0   0.     0.     0.
  16     5.4   10.1     0.0      0.0      0.0     .3     32.3    0.0   0.    10.     0.
  17     5.2    0.0     0.0      0.0      0.0     .3     18.2    0.0   0.     0.     0.
  18     5.2    0.0     0.0      0.0      0.0     .2     15.1    0.0   0.     0.     0.
  19     5.3    0.0     0.0      0.0      0.0     .3     26.2    0.0   0.     6.     0.
  20     5.3   10.0     0.0      0.0      0.0     .3     24.3    0.0   0.    15.     0.

 MEAN    5.3   10.0     0.0      0.0      0.0     .3     18.7    0.0   0.     7.     0.

STD DEV   .1     .1     0.0      0.0      0.0     .1      6.3    0.0   0.     5.     0.

0.0 = NOT RECORDED
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AGROPYRON SPICATUM   STUDY AREA CEDAR MTN   DATE 29 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	5.6	10.5	31.5	0.0	0.0	.2	0.0	0.0	7.	2.	0.
2	5.5	0.0	13.5	0.0	0.0	.2	0.0	0.0	0.	0.	0.
3	5.6	10.4	32.0	0.0	0.0	.3	0.0	0.0	2.	4.	0.
4	5.5	0.0	15.5	0.0	0.0	.2	0.0	0.0	0.	0.	0.
5	5.4	0.0	13.0	0.0	0.0	.2	0.0	0.0	0.	0.	0.
6	5.5	9.5	22.3	0.0	0.0	.3	0.0	0.0	0.	1.	0.
7	5.6	0.0	18.0	0.0	0.0	.3	0.0	0.0	0.	0.	0.
8	5.5	0.0	26.4	0.0	0.0	.2	0.0	0.0	0.	0.	0.
9	5.4	0.0	18.0	0.0	0.0	.2	0.0	0.0	0.	0.	0.
10	5.5	0.0	17.5	0.0	0.0	.2	0.0	0.0	0.	0.	0.
11	5.4	0.0	22.0	0.0	0.0	.2	0.0	0.0	0.	0.	0.
12	5.4	0.0	9.5	0.0	0.0	.2	0.0	0.0	0.	0.	0.
13	5.5	9.8	25.0	0.0	0.0	.3	0.0	0.0	6.	3.	0.
14	5.5	10.5	31.5	0.0	0.0	.2	0.0	0.0	7.	4.	0.
15	5.6	0.0	17.0	0.0	0.0	.2	0.0	0.0	0.	0.	0.
16	5.5	11.0	45.5	0.0	0.0	.3	0.0	0.0	6.	12.	0.
17	5.3	0.0	18.0	0.0	0.0	.2	0.0	0.0	0.	0.	0.
18	5.4	0.0	17.5	0.0	0.0	.2	0.0	0.0	0.	0.	0.
19	5.6	10.4	43.7	0.0	0.0	.2	0.0	0.0	5.	3.	0.
20	5.5	10.6	35.0	0.0	0.0	.3	0.0	0.0	5.	7.	0.
MEAN	5.5	10.3	23.6	0.0	0.0	.2	0.0	0.0	5.	5.	0.
STD DEV	.1	.5	10.0	0.0	0.0	.0	0.0	0.0	2.	4.	0.

0.0 = NOT RECORDED

AGROPYRON SPICATUM   STUDY AREA CEDAR MTN   DATE 13 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	5.9	0.0	0.0	0.0	0.0	.2	20.0	0.0	0.	0.	0.
2	5.9	0.0	0.0	0.0	0.0	.2	12.5	0.0	0.	0.	0.
3	6.1	16.0	0.0	0.0	0.0	.2	31.0	41.0	6.	4.	0.
4	6.0	0.0	0.0	0.0	0.0	.2	29.0	0.0	0.	0.	0.
5	5.9	0.0	0.0	0.0	0.0	.1	14.0	0.0	0.	0.	0.
6	6.0	0.0	0.0	0.0	0.0	.2	35.0	0.0	0.	0.	0.
7	6.2	0.0	0.0	0.0	0.0	.2	16.0	0.0	0.	0.	0.
8	6.0	0.0	0.0	0.0	0.0	.2	24.0	0.0	0.	0.	0.
9	6.0	0.0	0.0	0.0	0.0	.2	11.5	0.0	0.	0.	0.
10	6.0	0.0	0.0	0.0	0.0	.2	17.0	0.0	0.	0.	0.
11	6.1	0.0	0.0	0.0	0.0	.2	22.0	0.0	0.	0.	0.
12	5.9	0.0	0.0	0.0	0.0	.1	9.5	0.0	0.	0.	0.
13	6.0	0.0	0.0	0.0	0.0	.2	20.5	0.0	0.	0.	0.
14	6.1	16.3	0.0	0.0	0.0	.2	24.0	32.0	7.	3.	0.
15	6.2	0.0	0.0	0.0	0.0	.2	17.0	0.0	0.	0.	0.
16	6.1	16.4	0.0	0.0	0.0	.2	38.5	46.0	6.	4.	0.
17	6.0	0.0	0.0	0.0	0.0	.2	17.0	0.0	0.	0.	0.
18	6.0	0.0	0.0	0.0	0.0	.2	14.0	0.0	0.	0.	0.
19	6.2	16.3	0.0	0.0	0.0	.2	28.0	40.0	4.	5.	0.
20	6.1	16.3	0.0	0.0	0.0	.2	23.0	38.0	5.	4.	0.
MEAN	6.0	16.3	0.0	0.0	0.0	.2	21.2	39.4	6.	4.	0.
STD DEV	.1	.2	0.0	0.0	0.0	.0	8.0	5.1	1.	1.	0.

0.0 = NOT RECORDED

AGROPYRON SPICATUM STUDY AREA CEDAR MTN DATE 27 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	6.3	0.0	0.0	0.0	0.0	.1	20.3	0.0	0.	0.	0.
2	6.4	0.0	0.0	0.0	0.0	.1	12.8	0.0	0.	0.	0.
3	6.4	16.5	0.0	0.0	0.0	.1	31.0	41.5	0.	0.	0.
4	6.2	0.0	0.0	0.0	0.0	.1	25.0	0.0	0.	0.	0.
5	6.5	0.0	0.0	0.0	0.0	.1	19.2	0.0	0.	0.	0.
6	6.3	0.0	0.0	0.0	0.0	.1	21.2	0.0	0.	0.	0.
7	6.5	0.0	0.0	0.0	0.0	.1	17.3	0.0	0.	0.	0.
8	6.4	0.0	0.0	0.0	0.0	.1	24.8	0.0	0.	0.	0.
9	6.3	0.0	0.0	0.0	0.0	.1	14.5	0.0	0.	0.	0.
10	6.3	0.0	0.0	0.0	0.0	.1	17.0	0.0	0.	0.	0.
11	6.2	0.0	0.0	0.0	0.0	.1	20.0	0.0	0.	0.	0.
12	6.3	0.0	0.0	0.0	0.0	.1	8.6	0.0	0.	0.	0.
13	6.5	0.0	0.0	0.0	0.0	.1	17.2	0.0	0.	0.	0.
14	6.5	16.5	0.0	0.0	0.0	.1	21.5	31.0	0.	0.	0.
15	6.5	0.0	0.0	0.0	0.0	.1	16.3	0.0	0.	0.	0.
16	6.2	16.5	0.0	0.0	0.0	.1	34.0	55.0	0.	0.	0.
17	6.4	0.0	0.0	0.0	0.0	.1	19.2	0.0	0.	0.	0.
18	6.5	0.0	0.0	0.0	0.0	.1	20.8	0.0	0.	0.	0.
19	6.3	16.5	0.0	0.0	0.0	.1	31.8	43.2	0.	0.	0.
20	6.2	0.0	0.0	0.0	0.0	.1	25.1	0.0	0.	0.	0.
MEAN	6.4	16.5	0.0	0.0	0.0	.1	20.9	42.7	0.	0.	0.
STD DEV	.1	0.0	0.0	0.0	0.0	.0	6.4	9.8	0.	0.	0.

REPRODUCTIVE
CULMS SPARSE

0.0 = NOT RECORDED

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    AGROPYRON SPICATUM    STUDY AREA  CEDAR MTN          DATE 10   AUGUST  1981
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 PLANT  PHENOLOGICAL           CLUMP                  MAX.  MAX.   MAX.   NO.    NO.    NO.
  NO.   STAGE SCORE    LGTH.   WIDTH      DIAM.  LEAF   LEAF   SPK    SPL/   REPR   VEG
        VEG.  REPR.                              WIDTH  HGHT   HGHT   CULM   CULM   CULM
***********************************************************************************************
   1    6.5     0.0     0.0     0.0       0.0    0.0    18.2    0.0   0.     0.     0.
   2    6.6     0.0     0.0     0.0       0.0    0.0    11.8    0.0   0.     0.     0.
   3    6.5    16.6     0.0     0.0       0.0    0.0    29.0   34.3   0.     9.     0.
   4    6.6     0.0     0.0     0.0       0.0    0.0    20.4    0.0   0.     0.     0.
   5    6.4     0.0     0.0     0.0       0.0    0.0    17.3    0.0   0.     0.     0.
   6    6.5    16.9     0.0     0.0       0.0    0.0    20.7   28.6   0.     2.     0.
   7    6.6    16.9     0.0     0.0       0.0    0.0    29.2   40.0   0.     2.     0.
   8    6.5     0.0     0.0     0.0       0.0    0.0    24.2    0.0   0.     0.     0.
   9    6.4    16.6     0.0     0.0       0.0    0.0    28.0   36.5   0.     0.     0.
  10    6.5    16.7     0.0     0.0       0.0    0.0    20.5   20.0   0.     1.     0.
  11    6.5    16.6     0.0     0.0       0.0    0.0    21.6   29.2   0.     1.     0.
  12    6.5     0.0     0.0     0.0       0.0    0.0     9.7    0.0   0.     0.     0.
  13    6.6    16.9     0.0     0.0       0.0    0.0    24.0   35.0   0.     3.     0.
  14    6.5    16.4     0.0     0.0       0.0    0.0    21.7   32.0   0.     0.     0.
  15    6.6     0.0     0.0     0.0       0.0    0.0    19.3    0.0   0.     0.     0.
  16    6.6    16.9     0.0     0.0       0.0    0.0    35.0   55.1   0.    12.     0.
  17    6.5     0.0     0.0     0.0       0.0    0.0    16.3    0.0   0.     0.     0.
  18    6.5     0.0     0.0     0.0       0.0    0.0    16.0    0.0   0.     0.     0.
  19    6.5    16.9     0.0     0.0       0.0    0.0    30.0   41.6   0.     0.     0.
  20    6.6    16.9     0.0     0.0       0.0    0.0    30.2   39.5   0.     8.     0.

 MEAN   6.5    16.8     0.0     0.0       0.0    0.0    22.2   35.6   0.     5.     0.

STD DEV  .1      .2     0.0     0.0       0.0    0.0     6.6    8.9   0.     4.     0.

0.0 = NOT RECORDED
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  AGROPYRON SPICATUM   STUDY AREA  CEDAR MTN          DATE 25   AUGUST  1981
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PLANT  PHENOLOGICAL        CLUMP             MAX.  MAX.   MAX.   NO.    NO.    NO.
 NO.   STAGE SCORE  LGTH.  WIDTH    DIAM.  LEAF   LEAF   SPK    SPL/   REPR   VEG
       VEG.  REPR.                         WIDTH  HGHT   HGHT   CULM   CULM   CULM
*******************************************************************************************
  1    6.8    0.0   0.0    0.0      0.0    0.0    17.1    0.0   0.     0.     0.
  2    6.9    0.0   0.0    0.0      0.0    0.0    10.5    0.0   0.     0.     0.
  3    6.9   16.9   0.0    0.0      0.0    0.0    20.0   40.0   0.     0.     0.
  4    6.9    0.0   0.0    0.0      0.0    0.0    21.0    0.0   0.     0.     0.
  5    6.9    0.0   0.0    0.0      0.0    0.0     3.0    0.0   0.     0.     0.
  6    6.9   16.9   0.0    0.0      0.0    0.0    22.0   29.5   0.     0.     0.
  7    6.9    0.0   0.0    0.0      0.0    0.0    17.4    0.0   0.     0.     0.  80% UTILIZATION
  8    6.8    0.0   0.0    0.0      0.0    0.0    26.2    0.0   0.     0.     0.  BY RABBITS
  9    6.9    0.0   0.0    0.0      0.0    0.0    13.0    0.0   0.     0.     0.
 10    6.9   16.9   0.0    0.0      0.0    0.0    17.5   23.0   0.     0.     0.
 11    6.9   16.9   0.0    0.0      0.0    0.0    22.3   29.5   0.     0.     0.
 12    6.9    0.0   0.0    0.0      0.0    0.0     7.6    0.0   0.     0.     0.
 13    6.9    0.0   0.0    0.0      0.0    0.0    16.5    0.0   0.     0.     0.
 14    6.9   16.9   0.0    0.0      0.0    0.0    21.1   31.0   0.     0.     0.
 15    6.8   16.9   0.0    0.0      0.0    0.0    29.6   34.5   0.     0.     0.
 16    6.8   16.9   0.0    0.0      0.0    0.0    40.0   52.3   0.     0.     0.
 17    6.9    0.0   0.0    0.0      0.0    0.0    19.2    0.0   0.     0.     0.
 18    6.9    0.0   0.0    0.0      0.0    0.0    20.0    0.0   0.     0.     0.
 19    6.9    0.0   0.0    0.0      0.0    0.0    30.1   42.2   0.     0.     0.
 20    6.7    0.0   0.0    4.5      0.0    0.0     0.0    0.0   0.     0.     0.


 MEAN  6.9   16.9   0.0    4.5      0.0    0.0    19.7   35.3   0.     0.     0.

STD DEV .1     .0   0.0    0.0      0.0    0.0     8.4    9.2   0.     0.     0.

0.0 = NOT RECORDED
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     AGROPYRON SPICATUM    STUDY AREA  CEDAR MTN          DATE 13   SEPT   1981
    --------------------              ----------               ----------------

 PLANT  PHENOLOGICAL          CLUMP                 MAX.  MAX.   MAX.   NO.    NO.    NO.
  NO.   STAGE SCORE   LGTH.   WIDTH     DIAM. LEAF   LEAF   SPK    SPL/   REPR   VEG
        VEG.   REPR.                          WIDTH  HGHT   HGHT   CULM   CULM   CULM
*****************************************************************************************
   1    6.9     0.0    0.0     0.0      0.0   0.0    17.8    0.0   0.     0.     0.
   2    6.9     0.0    0.0     0.0      0.0   0.0     9.0    0.0   0.     0.     0.
   3    6.9    16.9    0.0     0.0      0.0   0.0    42.5   25.4   0.     0.     0.
   4    6.9     0.0    0.0     0.0      0.0   0.0    22.7    0.0   0.     0.     0.
   5    6.9     0.0    0.0     0.0      0.0   0.0    11.0    0.0   0.     0.     0.
   6    6.9     0.0    0.0     0.0      0.0   0.0    31.0    0.0   0.     0.     0.
   7    6.9     0.0    0.0     0.0      0.0   0.0    15.0    0.0   0.     0.     0.
   8    6.9     0.0    0.0     0.0      0.0   0.0    26.2    0.0   0.     0.     0.
   9    6.9     0.0    0.0     0.0      0.0   0.0    10.5    0.0   0.     0.     0.
  10    6.9     0.0    0.0     0.0      0.0   0.0     9.5    0.0   0.     0.     0.
  11    6.9     0.0    0.0     0.0      0.0   0.0    22.4    0.0   0.     0.     0.
  12    6.9     0.0    0.0     0.0      0.0   0.0     8.3    0.0   0.     0.     0.
  13    6.9     0.0    0.0     0.0      0.0   0.0    19.2    0.0   0.     0.     0.
  14    6.9    16.9    0.0     0.0      0.0   0.0    22.6   21.0   0.     0.     0.
  15    6.9     0.0    0.0     0.0      0.0   0.0    16.0    0.0   0.     0.     0.
  16    6.9    16.9    0.0     0.0      0.0   0.0    33.0   64.5   0.     0.     0.
  17    6.9     0.0    0.0     0.0      0.0   0.0    17.5    0.0   0.     0.     0.
  18    6.9     0.0    0.0     0.0      0.0   0.0    18.5    0.0   0.     0.     0.
  19    6.9    16.9    0.0     0.0      0.0   0.0    31.0   63.0   0.     0.     0.
  20    6.9    16.9    0.0     0.0      0.0   0.0    28.5   38.5   0.     0.     0.

 MEAN   6.9    16.9    0.0     0.0      0.0   0.0    20.6   42.5   0.     0.     0.

STD DEV  .0      .0    0.0     0.0      0.0   0.0     9.3   20.5   0.     0.     0.

0.0 = NOT RECORDED
```

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     AGROPYRON SPICATUM    STUDY AREA  CUMBER. 3           DATE 02   MAY      1981
    --------------------               ----------             ------------------

PLANT  PHENOLOGICAL              CLUMP               MAX.  MAX.  MAX.  NO.   NO.   NO.
 NO.   STAGE SCORE     LGTH.     WIDTH     DIAM.  LEAF  LEAF  SPK   SPL/  REPR  VEG
       VEG.  REPR.                                WIDTH HGHT  HGHT  CULM  CULM  CULM
************************************************************************************
  1    4.3     0.0     22.0      12.0      0.0     .2   18.2   0.0  0.     0.    0.
  2    4.1     0.0     23.0      14.0      0.0     .2   26.0   0.0  0.     0.    0.
  3    4.6     0.0      8.0       7.0      0.0     .3   20.6   0.0  0.     0.    0.
  4    4.6     0.0     17.0      14.0      0.0     .2   19.6   0.0  0.     0.    0.
  5    4.6     0.0      3.0       2.0      0.0     .3   20.3   0.0  0.     0.    0.
  6    4.5     0.0     17.0      15.0      0.0     .2   24.1   0.0  0.     0.    0.
  7    5.0     0.0     22.0      11.0      0.0     .2   24.0   0.0  0.     0.    0.
  8    4.6     0.0      4.0       5.0      0.0     .2   18.4   0.0  0.     0.    0.
  9    4.5     0.0      7.0       5.0      0.0     .2   20.7   0.0  0.     0.    0.
 10    4.5     0.0      8.0       4.0      0.0     .2   16.2   0.0  0.     0.    0.
 11    4.6     0.0     23.0      20.0      0.0     .2   16.6   0.0  0.     0.    0.
 12    4.6     9.3     20.0      15.0      0.0     .2   24.8   0.0  0.     0.    0.
 13    4.3     0.0     12.0       5.0      0.0     .2   16.1   0.0  0.     0.    0.
 14    4.8     0.0     17.0      10.0      0.0     .2   22.8   0.0  0.     0.    0.
 15    4.6     0.0      4.0       2.0      0.0     .2   15.2   0.0  0.     0.    0.
 16    4.6     0.0      7.0       5.0      0.0     .2   11.1   0.0  0.     0.    0.
 17    4.8     9.3     14.0      12.0      0.0     .2   22.8   0.0  0.     0.    0.
 18    4.6     0.0      5.0       4.0      0.0     .3   17.8   0.0  0.     0.    0.
 19    4.6     0.0      3.0       2.0      0.0     .2   22.3   0.0  0.     0.    0.
 20    5.1     0.0      8.0       3.0      0.0     .2   19.8   0.0  0.     0.    0.


 MEAN    4.6     9.3   12.2       8.4      0.0     .2   19.9   0.0  0.     0.    0.

STD DEV   .2     0.0    7.3       5.4      0.0     .0    3.8   0.0  0.     0.    0.

0.0 = NOT RECORDED
```

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     AGROPYRON SPICATUM    STUDY AREA  CUMBER. 3          DATE 26   MAY     1981
     ------------------                ---------               ------------------

PLANT  PHENOLOGICAL         CLUMP             MAX.  MAX.   MAX.   NO.    NO.    NO.
 NO.   STAGE SCORE   LGTH.  WIDTH    DIAM.  LEAF   LEAF   SPK    SPL/   REPR   VEG
       VEG.  REPR.                          WIDTH  HGHT   HGHT   CULM   CULM   CULM
*****************************************************************************************
  1    4.8    0.0    15.0     8.0     0.0    .3    29.5    0.0    0.     0.    150.
  2    4.8    0.0    29.0     6.0     0.0    .2    31.0    0.0    0.     0.    130.
  3    4.5    0.0     3.0     3.0     0.0    .3    30.0    0.0    0.     0.     20.
  4    5.1    0.0    12.0    12.0     0.0    .3    29.0    0.0    0.     0.    150.
  5    4.2    0.0     1.0     1.0     0.0    .3    39.0    0.0    0.     0.     10.
  6    4.5    0.0    27.0    10.0     0.0    .3    28.0    0.0    0.     0.    150.
  7    4.5    0.0    20.0     6.0     0.0    .3    30.0    0.0    0.     0.    100.
  8    4.3    0.0     1.0     1.0     0.0    .2    29.0    0.0    0.     0.     15.
  9    4.9    0.0    12.0     4.0     0.0    .3    31.0    0.0    0.     0.     30.
 10    4.8    0.0     2.0     2.0     0.0    .3    34.0    0.0    0.     0.     20.
 11    4.3    0.0    18.0    18.0     0.0    .2    27.0    0.0    0.     0.    300.
 12    4.7    0.0    13.0    13.0     0.0    .3    27.0    0.0    0.     0.    200.
 13    4.3    0.0    13.0     5.0     0.0    .3    24.0    0.0    0.     0.     50.
 14    4.3    0.0    16.0     9.0     0.0    .3    29.0    0.0    0.     0.     70.
 15    4.9    0.0     5.0     2.0     0.0    .3    31.0    0.0    0.     0.     15.
 16    4.6    0.0     5.0     5.0     0.0    .2    21.0    0.0    0.     0.     30.
 17    4.8    0.0    11.0    11.0     0.0    .3    34.0    0.0    0.     0.    100.
 18    4.8    0.0     4.0     4.0     0.0    .3    32.0    0.0    0.     0.     30.
 19    4.3    0.0      .5      .5     0.0    .2    18.0    0.0    0.     0.      6.
 20    4.7    0.0     6.0     1.0     0.0    .3    24.0    0.0    0.     0.     20.

 MEAN  4.6    0.0    10.7     6.1     0.0    .3    28.9    0.0    0.     0.     80.

STD DEV .3    0.0     8.5     4.8     0.0    .0     4.7    0.0    0.     0.     79.

0.0 = NOT RECORDED
```

AGROPYRON SPICATUM   STUDY AREA CUMBER. 3   DATE 05 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	4.9	10.1	0.0	0.0	0.0	.3	36.3	29.8	0.	0.	0.
2	5.3	10.1	0.0	0.0	0.0	.3	38.1	30.0	0.	0.	0.
3	4.7	0.0	0.0	0.0	0.0	.3	37.3	0.0	0.	0.	0.
4	5.8	9.7	0.0	0.0	0.0	.3	32.7	0.0	0.	0.	0.
5	5.8	9.5	0.0	0.0	0.0	.3	42.0	0.0	0.	0.	0.
6	5.5	0.0	0.0	0.0	0.0	.3	26.7	29.5	0.	0.	0.
7	4.9	9.4	0.0	0.0	0.0	.3	38.0	30.0	0.	0.	0.
8	5.1	0.0	0.0	0.0	0.0	.2	32.0	0.0	0.	0.	0.
9	5.3	0.0	0.0	0.0	0.0	.3	27.0	0.0	0.	0.	0.
10	4.9	0.0	0.0	0.0	0.0	.3	41.5	0.0	0.	0.	0.
11	4.5	0.0	0.0	0.0	0.0	.3	34.0	0.0	0.	0.	0.
12	4.8	0.0	0.0	0.0	0.0	.3	36.6	0.0	0.	0.	0.
13	5.3	0.0	0.0	0.0	0.0	.3	27.4	0.0	0.	0.	0.
14	4.8	0.0	0.0	0.0	0.0	.3	32.5	0.0	0.	0.	0.
15	5.3	0.0	0.0	0.0	0.0	.3	34.7	0.0	0.	0.	0.
16	5.2	0.0	0.0	0.0	0.0	.3	22.7	0.0	0.	0.	0.
17	5.3	9.3	0.0	0.0	0.0	.3	40.5	35.6	0.	0.	0.
18	5.2	0.0	0.0	0.0	0.0	.3	36.1	0.0	0.	0.	0.
19	5.1	0.0	0.0	0.0	0.0	.3	40.0	0.0	0.	0.	0.
20	5.2	10.3	0.0	0.0	0.0	.3	42.2	30.8	0.	0.	0.
MEAN	5.1	9.8	0.0	0.0	0.0	.3	34.9	31.0	0.	0.	0.
STD DEV	.3	.4	0.0	0.0	0.0	.0	5.6	2.3	0.	0.	0.

0.0 = NOT RECORDED

AGROPYRON SPICATUM   STUDY AREA CUMBER. 3   DATE 16 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	5.1	10.3	0.0	0.0	0.0	0.0	36.0	39.9	0.	2.	0.
2	5.4	10.2	0.0	0.0	0.0	0.0	42.0	43.7	0.	1.	0.
3	5.8	0.0	0.0	0.0	0.0	0.0	34.2	0.0	0.	0.	0.
4	5.5	10.3	0.0	0.0	0.0	0.0	34.3	38.6	0.	10.	0.
5	5.4	10.3	0.0	0.0	0.0	0.0	46.4	46.9	0.	5.	0.
6	5.2	0.0	0.0	0.0	0.0	0.0	27.0	0.0	0.	0.	0.
7	5.4	10.3	0.0	0.0	0.0	0.0	41.0	41.5	0.	3.	0.
8	5.3	0.0	0.0	0.0	0.0	0.0	30.5	0.0	0.	0.	0.
9	5.3	0.0	0.0	0.0	0.0	0.0	36.6	0.0	0.	0.	0.
10	5.6	0.0	0.0	0.0	0.0	0.0	33.5	0.0	0.	0.	0.
11	5.4	0.0	0.0	0.0	0.0	0.0	36.1	0.0	0.	0.	0.
12	5.2	10.2	0.0	0.0	0.0	0.0	44.0	39.3	0.	1.	0.
13	5.6	0.0	0.0	0.0	0.0	0.0	24.5	0.0	0.	0.	0.
14	5.1	0.0	0.0	0.0	0.0	0.0	33.4	0.0	0.	0.	0.
15	5.4	9.3	0.0	0.0	0.0	0.0	53.8	54.0	0.	15.	0.
16	5.4	0.0	0.0	0.0	0.0	0.0	19.1	0.0	0.	0.	0.
17	5.5	10.3	0.0	0.0	0.0	0.0	39.8	47.2	0.	5.	0.
18	5.2	0.0	0.0	0.0	0.0	0.0	38.8	0.0	0.	0.	0.
19	5.1	0.0	0.0	0.0	0.0	0.0	33.5	0.0	0.	0.	0.
20	5.2	10.3	0.0	0.0	0.0	0.0	36.3	44.5	0.	10.	0.
MEAN	5.4	10.2	0.0	0.0	0.0	0.0	36.0	44.0	0.	6.	0.
STD DEV	.2	.3	0.0	0.0	0.0	0.0	7.7	4.9	0.	5.	0.

0.0 = NOT RECORDED

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   AGROPYRON SPICATUM   STUDY AREA  CUMBER. 3            DATE 30   JUNE     1981
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 PLANT  PHENOLOGICAL            CLUMP                  MAX.  MAX.   MAX.   NO.    NO.    NO.
  NO.   STAGE SCORE    LGTH.   WIDTH     DIAM.  LEAF   LEAF   SPK    SPL/   REPR   VEG
        VEG.  REPR.                             WIDTH  HGHT   HGHT   CULM   CULM   CULM
******************************************************************************************
   1     5.5   10.3    0.0     0.0       0.0    0.0    36.6   40.2   0.     2.     0.
   2     5.8   10.3    0.0     0.0       0.0    0.0    42.1   43.8   0.     1.     0.
   3     5.7   10.2    0.0     0.0       0.0    0.0    39.5   35.0   0.     1.     0.
   4     5.5   10.3    0.0     0.0       0.0    0.0    37.0   43.0   0.    18.     0.
   5     5.5   10.3    0.0     0.0       0.0    0.0    40.0   45.5   0.     8.     0.
   6     5.5   10.3    0.0     0.0       0.0    0.0    29.9    0.0   0.     0.     0.
   7     5.5   10.4    0.0     0.0       0.0    0.0    47.0   44.5   0.    10.     0.
   8     5.4   10.0    0.0     0.0       0.0    0.0    34.5    0.0   0.     0.     0.
   9     5.3   10.2    0.0     0.0       0.0    0.0    36.0   44.5   0.     8.     0.
  10     5.7   10.0    0.0     0.0       0.0    0.0    40.7    0.0   0.     0.     0.
  11     5.3   10.0    0.0     0.0       0.0    0.0    32.0    0.0   0.     0.     0.
  12     5.3   10.2    0.0     0.0       0.0    0.0    42.1   38.6   0.     2.     0.
  13     5.6   10.0    0.0     0.0       0.0    0.0    24.6    0.0   0.     0.     0.
  14     5.2   10.3    0.0     0.0       0.0    0.0    33.6    0.0   0.     0.     0.
  15     5.4   10.0    0.0     0.0       0.0    0.0    31.0    0.0   0.     0.     0.
  16     5.5   10.0    0.0     0.0       0.0    0.0    27.0    0.0   0.     0.     0.
  17     5.5   10.4    0.0     0.0       0.0    0.0    41.0   50.0   0.     5.     0.
  18     5.5   10.0    0.0     0.0       0.0    0.0    39.0    0.0   0.     0.     0.
  19     5.2   10.0    0.0     0.0       0.0    0.0    30.2    0.0   0.     0.     0.
  20     5.5   10.4    0.0     0.0       0.0    0.0    36.5   49.5   0.     7.     0.

  MEAN   5.5   10.2    0.0     0.0       0.0    0.0    36.0   43.5   0.     6.     0.

STD DEV   .2     .2    0.0     0.0       0.0    0.0     5.7    4.6   0.     5.     0.

0.0 = NOT RECORDED
```

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     AGROPYRON SPICATUM    STUDY AREA  CUMBER. 3             DATE 14   JULY    1981
     ------------------               ----------             ------------------

  PLANT  PHENOLOGICAL            CLUMP
   NO.   STAGE SCORE   LGTH.   WIDTH    DIAM.  MAX.  MAX.  MAX.  NO.    NO.   NO.
         VEG.  REPR.                           LEAF  LEAF  SPK   SPL/   REPR  VEG
                                               WIDTH HGHT  HGHT  CULM   CULM  CULM
*******************************************************************************
   1     6.2   16.5    0.0     0.0      0.0    0.0   34.0  38.0  6.     1.    0.
   2     6.0   16.5    0.0     0.C      0.0    0.0   45.0  42.0  6.     1.    0.
   3     6.2   16.5    0.0     0.0      0.0    0.0   48.0  46.0  5.     1.    0.
   4     6.3   16.5    0.0     0.0      0.0    0.0   47.0  45.0  6.    14.    0.
   5     6.2   16.5    0.0     0.0      0.0    0.0   48.0  44.0  6.     7.    0.
   6     6.2    0.0    0.0     0.0      0.0    0.0   27.0   0.0  0.     0.    0.
   7     6.2   16.5    0.0     0.0      0.0    0.0   40.0  46.0  7.     9.    0.
   8     6.1    0.0    0.0     0.0      0.0    0.0   27.0   0.0  0.     0.    0.
   9     6.1   16.5    0.0     0.0      0.0    0.0   32.0  59.0  6.     1.    0.
  10     6.0    0.0    0.0     0.0      0.0    0.0   41.0   0.0  0.     0.    0.
  11     6.0    0.0    0.0     0.0      0.0    0.0   37.0   0.0  0.     0.    0.
  12     6.0   16.5    0.0     0.0      0.0    0.0   31.0  50.0  6.     1.    0.
  13     6.4    0.0    0.0     0.0      0.0    0.0   27.0   0.0  0.     0.    0.
  14     6.2    0.0    0.0     0.0      0.0    0.0   32.0   0.0  0.     0.    0.
  15     6.0   16.5    0.0     0.0      0.0    0.0   47.0  58.0  7.    11.    0.
  16     6.1    0.0    0.0     0.0      0.0    0.0   23.0   0.0  0.     0.    0.
  17     6.2   16.5    0.0     0.0      0.0    0.0   39.0  48.0  8.     4.    0.
  18     6.0    0.0    0.0     0.0      0.0    0.0   31.0   0.0  0.     0.    0.
  19     6.0    0.0    0.0     0.0      0.0    0.0   25.0   0.0  0.     0.    0.
  20     6.0   16.5    0.0     0.0      0.0    0.0   38.0  50.0  7.     5.    0.

  MEAN   6.1   16.5    0.0     0.0      0.0    0.0   36.0  47.8  6.     5.    0.

STD DEV   .1    0.0    0.0     0.0      0.0    0.0    8.2   6.3  1.     5.    0.

0.0 = NOT RECORDED
```

```
    AGROPYRON SPICATUM   STUDY AREA  CUMBER. 3         DATE 28   JULY   1981
   --------------------              ----------         ------------------

PLANT  PHENOLOGICAL          CLUMP              MAX.  MAX.   MAX.   NO.    NO.    NO.
 NO.   STAGE SCORE   LGTH.   WIDTH     DIAM.  LEAF   LEAF   SPK    SPL/   REPR   VEG
       VEG.   REPR.                           WIDTH  HGHT   HGHT   CULM   CULM   CULM
*****************************************************************************************
  1     6.1   16.8    0.0     0.0      0.0     .2    37.0   39.5   0.     0.     0.
  2     6.2   16.8    0.0     0.0      0.0     .2    41.0   45.0   0.     0.     0.
  3     6.3    0.0    0.0     0.0      0.0     .1    43.0    0.0   0.     0.     0.
  4     6.3   16.5    0.0     0.0      0.0     .1    34.5   38.5   0.     0.     0.
  5     6.3   16.3    0.0     0.0      0.0     .1    42.5   37.0   0.     0.     0.
  6     6.9    0.0    0.0     0.0      0.0     .2    30.0    0.0   0.     0.     0.
  7     6.1   16.4    0.0     0.0      0.0     .1    32.5   42.5   0.     0.     0.
  8     6.4    0.0    0.0     0.0      0.0     .1    34.0    0.0   0.     0.     0.
  9     6.2    0.0    0.0     0.0      0.0     .1    34.0    0.0   0.     0.     0.
 10     6.1    0.0    0.0     0.0      0.0     .1    29.2    0.0   0.     0.     0.
 11     6.1    0.0    0.0     0.0      0.0     .1    32.8    0.0   0.     0.     0.
 12     6.3   16.5    0.0     0.0      0.0     .1    39.5   36.0   0.     0.     0.
 13     6.4    0.0    0.0     0.0      0.0     .1    27.1    0.0   0.     0.     0.
 14     6.2    0.0    0.0     0.0      0.0     .1    32.8    0.0   0.     0.     0.
 15     6.0    0.0    0.0     0.0      0.0     .1    31.5    0.0   0.     0.     0.
 16     6.2    0.0    0.0     0.0      0.0     .1    26.5    0.0   0.     0.     0.
 17     6.1   16.8    0.0     0.0      0.0     .2    39.5   45.0   0.     0.     0.
 18     6.1    0.0    0.0     0.0      0.0     .1    34.8    0.0   0.     0.     0.
 19     6.6    0.0    0.0     0.0      0.0     .1    20.5    0.0   0.     0.     0.
 20     6.3   16.8    0.0     0.0      0.0     .1    26.8   40.0   0.     0.     0.

 MEAN   6.3   16.6    0.0     0.0      0.0     .1    33.5   40.4   0.     0.     0.

STD DEV  .2     .2    0.0     0.0      0.0     .0     5.9    3.4   0.     0.     0.

0.0 = NOT RECORDED
```

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    AGROPYRON SPICATUM    STUDY AREA  CUMBER. 3            DATE 11   AUGUST  1981
    ------------------                ----------                -----------------

 PLANT  PHENOLOGICAL          CLUMP                  MAX. MAX.   MAX.   NO.    NO.    NO.
   NO.  STAGE SCORE  LGTH.   WIDTH     DIAM. LEAF   LEAF   SPK    SPL/   REPR   VEG
        VEG.  REPR.                          WIDTH  HGHT   HGHT   CULM   CULM   CULM
****************************************************************************************
    1   6.5    16.9    0.0     0.0      0.0  0.0    29.0   37.1   0.     0.     0.
    2   6.5    16.9    0.0     0.0      0.0  0.0    40.0   40.0   0.     0.     0.
    3   6.6    16.9    0.0     0.0      0.0  0.0    43.0   37.5   0.     0.     0.
    4   6.6    16.9    0.0     0.0      0.0  0.0    42.0   33.5   0.     0.     0.
    5   6.8    16.9    0.0     0.0      0.0  0.0    48.0   40.5   0.     0.     0.
    6   6.8     0.0    0.0     0.0      0.0  0.0    28.5    0.0   0.     0.     0.
    7   6.7    16.9    0.0     0.0      0.0  0.0    37.0   46.5   0.     0.     0.
    8   6.7     0.0    0.0     0.0      0.0  0.0    35.0    0.0   0.     0.     0.
    9   6.9     0.0    0.0     0.0      0.0  0.0    34.0    0.0   0.     0.     0.
   10   6.7     0.0    0.0     0.0      0.0  0.0    30.0    0.0   0.     0.     0.
   11   6.7     0.0    0.0     0.0      0.0  0.0    38.0    0.0   0.     0.     0.
   12   6.8    17.0    0.0     0.0      0.0  0.0    43.0   39.5   0.     0.     0.
   13   6.9     0.0    0.0     0.0      0.0  0.0    25.0    0.0   0.     0.     0.
   14   6.8     0.0    0.0     0.0      0.0  0.0    24.0    0.0   0.     0.     0.
   15   6.6    16.9    0.0     0.0      0.0  0.0    55.0   57.0   0.     0.     0.
   16   6.9     0.0    0.0     0.0      0.0  0.0    22.0    0.0   0.     0.     0.
   17   6.6    16.9    0.0     0.0      0.0  0.0    43.5   48.0   0.     0.     0.
   18   6.7     0.0    0.0     0.0      0.0  0.0    33.0    0.0   0.     0.     0.
   19   6.8     0.0    0.0     0.0      0.0  0.0    26.0    0.0   0.     0.     0.
   20   6.9    16.9    0.0     0.0      0.0  0.0    28.5   50.0   0.     0.     0.

 MEAN   6.7    16.9    0.0     0.0      0.0  0.0    35.2   43.0   0.     0.     0.

STD DEV  .1      .0    0.0     0.0      0.0  0.0     8.8    7.2   0.     0.     0.

0.0 = NOT RECORDED
```

AGROPYRON SPICATUM   STUDY AREA CUMBER. 3   DATE 25 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	6.6	16.9	0.0	0.0	0.0	0.0	37.0	40.4	0.	0.	0.
2	6.5	16.9	0.0	0.0	0.0	0.0	43.4	44.0	0.	0.	0.
3	6.8	16.9	0.0	0.0	0.0	0.0	43.0	38.5	0.	0.	0.
4	6.8	16.9	0.0	0.0	0.0	0.0	38.0	40.3	0.	0.	0.
5	6.8	16.9	0.0	0.0	0.0	0.0	49.0	42.8	0.	0.	0.
6	6.5	0.0	0.0	0.0	0.0	0.0	26.5	0.0	0.	0.	0.
7	6.7	16.9	0.0	0.0	0.0	0.0	41.0	44.5	0.	0.	0.
8	6.8	0.0	0.0	0.0	0.0	0.0	23.5	0.0	0.	0.	0.
9	6.7	0.0	0.0	0.0	0.0	0.0	36.0	0.0	0.	0.	0.
10	6.9	0.0	0.0	0.0	0.0	0.0	26.0	0.0	0.	0.	0.
11	6.7	0.0	0.0	0.0	0.0	0.0	34.8	0.0	0.	0.	0.
12	6.8	16.9	0.0	0.0	0.0	0.0	39.0	45.5	0.	0.	0.
13	6.8	0.0	0.0	0.0	0.0	0.0	28.8	0.0	0.	0.	0.
14	6.7	0.0	0.0	0.0	0.0	0.0	35.0	0.0	0.	0.	0.
15	6.4	0.0	0.0	0.0	0.0	0.0	32.5	0.0	0.	0.	0.
16	6.7	0.0	0.0	0.0	0.0	0.0	23.0	0.0	0.	0.	0.
17	6.6	0.0	0.0	0.0	0.0	0.0	37.0	0.0	0.	0.	0.
18	6.6	0.0	0.0	0.0	0.0	0.0	37.3	0.0	0.	0.	0.
19	6.7	0.0	0.0	0.0	0.0	0.0	26.0	0.0	0.	0.	0.
20	6.8	16.9	0.0	0.0	0.0	0.0	28.0	41.0	0.	0.	0.
MEAN	6.7	16.9	0.0	0.0	0.0	0.0	34.2	42.1	0.	0.	0.
STD DEV	.1	.0	0.0	0.0	0.0	0.0	7.2	2.4	0.	0.	0.

0.0 = NOT RECORDED

```
    AGROPYRON SPICATUM     STUDY AREA  CUMBER. 3            DATE 13   SEPT     1981
   --------------------              ----------            -----------------

PLANT  PHENOLOGICAL          CLUMP                MAX.  MAX.   MAX.   NO.    NO.    NO.
 NO.   STAGE SCORE   LGTH.   WIDTH     DIAM.  LEAF  LEAF   SPK    SPL/   REPR   VEG
       VEG.  REPR.                            WIDTH  HGHT  HGHT   CULM   CULM   CULM
*****************************************************************************************
  1    6.8    16.9    0.0     0.0      0.0    0.0   39.2   42.5   0.     0.     0.
  2    6.8    16.9    0.0     0.0      0.0    0.0   44.0   45.0   0.     0.     0.
  3    6.8    16.9    0.0     0.0      0.0    0.0   40.5   38.0   0.     0.     0.
  4    6.8     0.0    0.0     0.0      0.0    0.0   23.6    0.0   0.     0.     0.
  5    6.9    16.9    0.0     0.0      0.0    0.0   47.8   45.2   0.     0.     0.
  6    6.9     0.0    0.0     0.0      0.0    0.0   28.5    0.0   0.     0.     0.
  7    6.8    16.9    0.0     0.0      0.0    0.0   49.5   48.2   0.     0.     0.
  8    6.9     0.0    0.0     0.0      0.0    0.0   36.0    0.0   0.     0.     0.
  9    6.8    16.9    0.0     0.0      0.0    0.0   37.0   36.0   0.     0.     0.
 10    6.8     0.0    0.0     0.0      0.0    0.0   40.6    0.0   0.     0.     0.
 11    6.8     0.0    0.0     0.0      0.0    0.0   32.0    0.0   0.     0.     0.
 12    6.8     0.0    0.0     0.0      0.0    0.0   29.5    0.0   0.     0.     0.
 13    6.8     0.0    0.0     0.0      0.0    0.0   28.8    0.0   0.     0.     0.
 14    6.9     0.0    0.0     0.0      0.0    0.0   34.6    0.0   0.     0.     0.
 15    6.7    16.9    0.0     0.0      0.0    0.0   41.8   46.0   0.     0.     0.
 16    6.8     0.0    0.0     0.0      0.0    0.0   24.8    0.0   0.     0.     0.
 17    6.8    16.9    0.0     0.0      0.0    0.0   41.5   47.5   0.     0.     0.
 18    6.8     0.0    0.0     0.0      0.0    0.0   38.0    0.0   0.     0.     0.
 19    6.8     0.0    0.0     0.0      0.0    0.0   26.5    0.0   0.     0.     0.
 20    6.9    16.9    0.0     0.0      0.0    0.0   37.0   49.2   0.     0.     0.


MEAN   6.8    16.9    0.0     0.0      0.0    0.0   36.1   44.2   0.     0.     0.

STD DEV .1      .0    0.0     0.0      0.0    0.0    7.4    4.5   0.     0.     0.

0.0 = NOT RECORDED
```

```
   AGROPYRON SPICATUM   STUDY AREA  DEMER                 DATE  2   MAY    1981
  --------------------             ----------                -----------------

                                                MAX.  MAX.   MAX.  NO.    NO.    NO.
 PLANT  PHENOLOGICAL          CLUMP                                SPL/   REPR   VEG
  NO.   STAGE SCORE   LGTH.   WIDTH    DIAM.  LEAF   LEAF   SPK    CULM   CULM   CULM
        VEG.  REPR.                           WIDTH  HGHT   HGHT
*******************************************************************************************
   1    5.2    0.0    0.0     0.0      0.0    .2     33.0    0.0   0.     0.    100.
   2    4.9    9.1    0.0     0.0      0.0    .2     31.0    0.0   0.     0.    300.
   3    5.2    0.0    0.0     0.0      0.0    .2     28.3    0.0   0.     0.     90.
   4    4.9    0.0    0.0     0.0      0.0    .2     21.0    0.0   0.     0.    130.
   5    4.6    0.0    0.0     0.0      0.0    .2     22.0    0.0   0.     0.    190.
   6    4.9    0.0    0.0     0.0      0.0    .2     23.0    0.0   0.     0.    110.
   7    3.9    0.0    0.0     0.0      0.0    .1     14.2    0.0   0.     0.      1.

  MEAN  4.8    9.1    0.0     0.0      0.0    .2     24.6    0.0   0.     0.    132.

STD DEV  .4    0.0    0.0     0.0      0.0    .0      6.5    0.0   0.     0.     93.

0.0 = NOT RECORDED
```

AGROPYRON SPICATUM   STUDY AREA DEMER   DATE 20 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	5.3	9.8	18.0	8.0	0.0	.3	28.8	27.0	0.	20.	0.
2	5.1	10.5	36.0	15.0	0.0	.3	41.7	40.0	0.	70.	0.
3	5.5	9.5	20.0	10.0	0.0	.3	27.5	26.0	0.	1.	0.
4	5.4	9.5	37.0	23.0	0.0	.3	45.0	44.0	0.	60.	0.
5	5.5	9.0	30.0	20.0	0.0	.3	32.0	22.0	0.	15.	0.
6	5.3	9.2	15.0	15.0	0.0	.3	32.0	25.0	0.	10.	0.
7	4.6	0.0	.1	.1	0.0	.2	26.6	0.0	0.	0.	0.
MEAN	5.2	9.6	22.3	13.0	0.0	.3	33.4	30.7	0.	29.	0.
STD DEV	.3	.5	13.1	7.7	0.0	.0	7.2	9.0	0.	29.	0.

0.0 = NOT RECORDED

```
    AGROPYRON SPICATUM   STUDY AREA  DEMER                 DATE  2   JUNE    1981
   --------------------             ----------             ------------------

 PLANT  PHENOLOGICAL          CLUMP               MAX.  MAX.   MAX.   NO.   NO.    NO.
  NO.   STAGE SCORE   LGTH.   WIDTH      DIAM.  LEAF   LEAF   SPK    SPL/  REPR   VEG
        VEG.  REPR.                             WIDTH  HGHT   HGHT   CULM  CULM   CULM
*****************************************************************************************
   1    5.7    10.5    0.0     0.0       0.0    3.0    32.0   52.0   0.    55.    0.
   2    5.8    10.6    0.0     0.0       0.0    5.0    50.0   60.0   0.   160.    0.
   3    5.8    10.6    0.0     0.0       0.0    4.0    46.0   42.0   0.    90.    0.
   4    5.8    10.7    0.0     0.0       0.0    5.0    52.0   60.0   0.   100.    0.
   5    5.7    10.6    0.0     0.0       0.0    4.0    32.0   46.0   0.   100.    0.
   6    5.7    10.6    0.0     0.0       0.0    4.0    29.0    3.7   0.    50.    0.
   7    5.7     0.0    0.0     0.0       0.0    0.0     0.0    0.0   0.     0.    0.


  MEAN  5.7    10.6    0.0     0.0       0.0    4.2    40.2   44.0   0.    93.    0.

STD DEV  .1      .1    0.0     0.0       0.0     .8    10.3   21.0   0.    40.    0.

0.0 = NOT RECORDED
```

```
   AGROPYRON SPICATUM   STUDY AREA  DEMER                DATE 17   JUNE    1981
   ------------------              ----------                 ----------------

PLANT  PHENOLOGICAL             CLUMP                 MAX.  MAX.  MAX.   NO.    NO.    NO.
 NO.   STAGE SCORE    LGTH.    WIDTH     DIAM.  LEAF  LEAF  SPK    SPL/   REPR   VFG
       VEG.  REPR.                              WIDTH  HGHT  HGHT   CULM   CULM   CULM
*********************************************************************************************
  1     6.0   13.5     0.0      0.0       0.0    .4    31.9   60.9  9.     0.     0.
  2     6.0   13.8     0.0      0.0       0.0    .4    44.2   63.0 12.     0.     0.
  3     6.1   13.5     0.0      0.0       0.0    .4    34.2   55.0  8.     0.     0.
  4     6.1   13.5     0.0      0.0       0.0    .4    47.0   73.0  5.     0.     0.
  5     6.1   13.5     0.0      0.0       0.0    .4    31.0   54.2  7.     0.     0.
  6     6.1   13.5     0.0      0.0       0.0    .4    31.0   46.0  5.     0.     0.
  7     5.7    0.0     0.0      0.0       0.0   0.0     0.0    0.0  0.     0.     0.


 MEAN   6.0   13.1     0.0      0.0       0.0    .4    36.6   58.7  8.     0.     0.

STD DEV  .1    1.3     0.0      0.0       0.0    .0     7.2    9.2  3.     0.     0.

0.0 = NOT RECORDED
```

```
    AGROPYRON SPICATUM   STUDY AREA  DEMER                      DATE 29   JUNE    1981
  ----------------------            -----------                    -----------------

 PLANT  PHENOLOGICAL          CLUMP               MAX. MAX.  MAX.  NO.   NO.   NO.
  NO.   STAGE SCORE   LGTH.   WIDTH    DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
        VEG.  REPR.                          WIDTH HGHT  HGHT  CULM  CULM  CULM
****************************************************************************************
   1     6.3   16.3    0.0     0.0     0.0   0.0   32.0  54.0  0.    0.    0.
   2     6.3   16.9    0.0     0.0     0.0   0.0   48.0  57.0  0.    0.    0.
   3     6.1   16.8    0.0     0.0     0.0   0.0   32.0  51.0  0.    0.    0.
   4     6.1   16.8    0.0     0.0     0.0   0.0   36.0  65.0  0.    0.    0.
   5     6.1   16.8    0.0     0.0     0.0   0.0   35.0  71.0  0.    0.    0.
   6     6.1   16.8    0.0     0.0     0.0   0.0   30.0  51.0  0.    0.    0.
   7     6.1    0.0    0.0     0.0     0.0   0.0   34.0   0.0  0.    0.    0.   REP CULM GONE


  MEAN   6.2   16.7    0.0     0.0     0.0   0.0   35.3  58.2  0.    0.    0.

STD DEV   .1     .2    0.0     0.0     0.0   0.0    6.0   8.2  0.    0.    0.

0.0 = NOT RECORDED
```

```
    AGROPYRON SPICATUM    STUDY AREA  DEMER                  DATE 14   JULY    1981
   ---------------------             ----------                   ------------------

 PLANT   PHENOLOGICAL          CLUMP                 MAX.  MAX.   MAX.   NO.   NO.   NO.
  NO.    STAGE  SCORE   LGTH.  WIDTH    DIAM.  LEAF  LEAF   SPK    SPL/  REPR  VEG
         VEG.   REPR.                          WIDTH HGHT   HGHT   CULM  CULM  CULM
*********************************************************************************************
   1      6.2   16.7    0.0     0.0      0.0    .2    30.0   53.4   6.     7.     0.
   2      6.3   16.7    0.0     0.0      0.0    .4    42.5   57.0  12.    75.     0.
   3      6.2   16.6    0.0     0.0      0.0    .3    34.0   51.0   7.     4.     0.
   4      6.2   16.6    0.0     0.0      0.0    .2    35.7   76.0   7.    45.     0.
   5      6.2   16.7    0.0     0.0      0.0    .2    33.2   47.0   6.     9.     0.
   6      6.2   16.7    0.0     0.0      0.0    .2    28.7   43.0   6.     6.     0.
   7      6.2    0.0    0.0     0.0      0.0    .1    18.6    0.0   0.     0.     0.

  MEAN    6.2   16.7    0.0     0.0      0.0    .2    31.8   54.6   7.    24.     0.

STD DEV    .0     .1    0.0     0.0      0.0    .1     7.3   11.6   2.    29.     0.

0.0 = NOT RECORDED
```

AGROPYRON SPICATUM STUDY AREA DEMER DATE 28 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE		LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
	VEG.	REPR.									
1	6.2	16.9	0.0	0.0	0.0	0.0	31.8	58.0	0.	0.	0.
2	6.3	16.8	0.0	0.0	0.0	0.0	39.0	52.0	0.	0.	0.
3	6.5	16.7	0.0	0.0	0.0	0.0	36.0	51.0	0.	0.	0.
4	6.1	16.8	0.0	0.0	0.0	0.0	37.0	73.0	0.	0.	0.
5	6.2	16.7	0.0	0.0	0.0	0.0	28.0	51.0	0.	0.	0.
6	6.2	16.8	0.0	0.0	0.0	0.0	32.0	49.0	0.	0.	0.
7	6.3	0.0	0.0	0.0	0.0	0.0	35.0	0.0	0.	0.	0.
MEAN	6.3	16.8	0.0	0.0	0.0	0.0	34.1	55.7	0.	0.	0.
STD DEV	.1	.1	0.0	0.0	0.0	0.0	3.7	9.0	0.	0.	0.

0.0 = NOT RECORDED

```
    AGROPYRON SPICATUM   STUDY AREA  DEMER                      DATE 11   AUGUST  1981
    ------------------              ----------                  ----------------

 PLANT   PHENOLOGICAL          CLUMP                MAX.  MAX.   MAX.   NO.    NO.    NO.
  NO.    STAGE SCORE   LGTH.   WIDTH      DIAM.  LEAF   LEAF   SPK    SPL/   REPR   VEG
         VEG.  REPR.                             WIDTH  HGHT   HGHT   CULM   CULM   CULM
*****************************************************************************************
   1     6.4   16.8    0.0     0.0        0.0    .2     31.5   52.0   0.     0.     0.
   2     6.3    0.0    0.0     0.0        0.0    .1     22.0    0.0   0.     0.     0.
   3     6.3   16.8    0.0     0.0        0.0    .2     35.0   51.0   0.     0.     0.
   4     6.3   16.8    0.0     0.0        0.0    .2     50.5   77.0   0.     0.     0.
   5     6.3   16.8    0.0     0.0        0.0    .2     31.0   45.0   0.     0.     0.
   6     6.2   16.8    0.0     0.0        0.0    .2     30.5   45.0   0.     0.     0.
   7     6.7    0.0    0.0     0.0        0.0    .1     29.0    0.0   0.     0.     0.


  MEAN   6.4   16.8    0.0     0.0        0.0    .2     32.8   54.0   0.     0.     0.

STD DEV   .2     .0    0.0     0.0        0.0    .0      8.8   13.3   0.     0.     0.

0.0 = NOT RECORDED
```

AGROPYRON SPICATUM   STUDY AREA DEMER   DATE 25 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	6.4	16.8	0.0	0.0	0.0	0.0	33.6	53.5	0.	0.	0.
2	6.5	16.8	0.0	0.0	0.0	0.0	36.0	48.5	0.	0.	0.
3	6.5	16.8	0.0	0.0	0.0	0.0	15.8	52.0	0.	0.	0.
4	6.5	16.8	0.0	0.0	0.0	0.0	36.0	42.8	0.	0.	0.
5	6.5	16.8	0.0	0.0	0.0	0.0	34.0	48.0	0.	0.	0.
6	6.5	16.8	0.0	0.0	0.0	0.0	29.0	45.0	0.	0.	0.
7	6.5	16.8	0.0	0.0	0.0	0.0	30.5	40.0	0.	0.	0.
MEAN	6.5	16.8	0.0	0.0	0.0	0.0	30.7	47.1	0.	0.	0.
STD DEV	.0	.0	0.0	0.0	0.0	0.0	7.1	4.8	0.	0.	0.

0.0 = NOT RECORDED

```
   AGROPYRON SPICATUM   STUDY AREA  DEMER                 DATE 12   SEPT   1981
  --------------------              ----------            ------------------

 PLANT  PHENOLOGICAL          CLUMP                 MAX.  MAX.  MAX.  NO.   NO.   NO.
  NO.   STAGE SCORE   LGTH.   WIDTH   DIAM.  LEAF   LEAF  SPK   SPL/  REPR  VEG
        VEG.  REPR.                          WIDTH  HGHT  HGHT  CULM  CULM  CULM
*************************************************************************************
   1    7.0    0.0    0.0     0.0     0.0    0.0    0.0   0.0   0.    0.    0.
   2    7.1    0.0    0.0     0.0     0.0    0.0    0.0   0.0   0.    0.    0.
   3    7.3    0.0    0.0     0.0     0.0    0.0    0.0   0.0   0.    0.    0.
   4    7.4    0.0    0.0     0.0     0.0    0.0    0.0   0.0   0.    0.    0.
   5    7.5    0.0    0.0     0.0     0.0    0.0    0.0   0.0   0.    0.    0.
   6    7.2    0.0    0.0     0.0     0.0    0.0    0.0   0.0   0.    0.    0.
   7    7.1    0.0    0.0     0.0     0.0    0.0    0.0   0.0   0.    0.    0.

 MEAN   7.2    0.0    0.0     0.0     0.0    0.0    0.0   0.0   0.    0.    0.

STD DEV  .2    0.0    0.0     0.0     0.0    0.0    0.0   0.0   0.    0.    0.

0.0 = NOT RECORDED
```

AGROPYRON SPICATUM STUDY AREA HORSE CK. DATE 2 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	4.8	0.0	0.0	0.0	0.0	0.0	12.0	0.0	0.	0.	0.
2	4.5	0.0	0.0	0.0	0.0	0.0	13.1	0.0	0.	0.	0.
3	5.0	0.0	0.0	0.0	0.0	0.0	10.5	0.0	0.	0.	0.
4	4.2	0.0	0.0	0.0	0.0	0.0	7.8	0.0	0.	0.	0.
5	4.7	0.0	0.0	0.0	0.0	0.0	11.1	0.0	0.	0.	0.
6	5.0	0.0	0.0	0.0	0.0	0.0	9.8	0.0	0.	0.	0.
7	4.3	0.0	0.0	0.0	0.0	0.0	12.6	0.0	0.	0.	0.
8	4.9	0.0	0.0	0.0	0.0	0.0	10.1	0.0	0.	0.	0.
9	3.9	0.0	0.0	0.0	0.0	0.0	10.5	0.0	0.	0.	0.
10	4.2	0.0	0.0	0.0	0.0	0.0	14.2	0.0	0.	0.	0.
11	5.3	0.0	0.0	0.0	0.0	0.0	11.3	0.0	0.	0.	0.
12	4.7	0.0	0.0	0.0	0.0	0.0	9.0	0.0	0.	0.	0.
13	4.7	0.0	0.0	0.0	0.0	0.0	14.8	0.0	0.	0.	0.
14	5.2	0.0	0.0	0.0	0.0	0.0	15.0	0.0	0.	0.	0.
15	4.8	0.0	0.0	0.0	0.0	0.0	7.0	0.0	0.	0.	0.
16	4.6	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.	0.	0.
17	4.4	0.0	0.0	0.0	0.0	0.0	6.8	0.0	0.	0.	0.
18	4.3	0.0	0.0	0.0	0.0	0.0	10.1	0.0	0.	0.	0.
19	4.5	0.0	0.0	0.0	0.0	0.0	9.6	0.0	0.	0.	0.
20	5.1	0.0	0.0	0.0	0.0	0.0	6.4	0.0	0.	0.	0.
MEAN	4.7	0.0	0.0	0.0	0.0	0.0	10.3	0.0	0.	0.	0.
STD DEV	.4	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.	0.	0.

0.0 = NOT RECORDED

AGROPYRON SPICATUM   STUDY AREA HORSE CK.   DATE 19 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	5.1	10.0	20.0	19.0	0.0	.4	24.6	19.6	0.	30.	200.
2	5.3	10.0	14.0	13.0	0.0	.4	17.0	16.5	0.	30.	100.
3	5.3	10.0	16.0	14.0	0.0	.3	24.0	23.5	0.	20.	70.
4	5.3	0.0	3.0	3.0	0.0	.3	12.0	15.0	0.	0.	12.
5	5.4	10.1	1.0	1.0	0.0	.4	23.4	20.0	0.	3.	8.
6	5.3	10.3	.2	.2	0.0	.3	11.5	11.0	0.	1.	2.
7	5.4	10.1	.5	.5	0.0	.4	32.2	21.0	0.	3.	10.
8	5.4	10.2	5.0	1.0	0.0	.3	20.0	21.0	0.	6.	20.
9	5.2	10.0	.3	1.0	0.0	.3	15.7	11.0	0.	2.	7.
10	5.4	0.0	26.0	15.0	0.0	.3	26.8	0.0	0.	0.	100.
11	5.3	0.0	.1	.1	0.0	.3	12.0	0.0	0.	0.	1.
12	5.4	0.0	6.0	6.0	0.0	.3	17.0	0.0	0.	0.	20.
13	5.6	10.0	9.0	2.0	0.0	.3	27.5	21.0	0.	8.	40.
14	5.5	0.0	11.0	6.0	0.0	.4	22.0	0.0	0.	0.	20.
15	5.4	10.0	17.0	12.0	0.0	.4	20.5	14.5	0.	3.	90.
16	5.1	0.0	3.0	1.0	0.0	.2	12.0	0.0	0.	0.	12.
17	5.2	0.0	2.5	.5	0.0	.3	10.2	0.0	0.	0.	5.
18	5.3	0.0	3.0	.3	0.0	.3	12.0	0.0	0.	0.	5.
19	5.5	10.0	1.2	.3	0.0	.3	27.2	20.0	0.	1.	6.
20	5.2	0.0	6.0	.8	0.0	.3	11.0	0.0	0.	0.	10.
MEAN	5.3	10.1	7.2	4.8	0.0	.3	18.9	17.8	0.	10.	37.
STD DEV	.1	.1	7.6	6.1	0.0	.1	6.8	4.1	0.	11.	51.

0.0 = NOT RECORDED

AGROPYRON SPICATUM   STUDY AREA HORSE CK.   DATE 3 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	5.3	10.2	0.0	0.0	0.0	0.0	28.5	24.7	0.	0.	0.
2	5.5	10.3	0.0	0.0	0.0	0.0	25.1	39.4	0.	0.	0.
3	5.6	10.4	0.0	0.0	0.0	0.0	24.7	29.5	0.	0.	0.
4	5.4	9.8	0.0	0.0	0.0	0.0	17.6	21.0	0.	0.	0.
5	5.7	10.5	0.0	0.0	0.0	0.0	28.9	41.0	0.	0.	0.
6	5.5	10.5	0.0	0.0	0.0	0.0	31.0	38.1	0.	0.	0.
7	5.5	10.4	0.0	0.0	0.0	0.0	28.4	43.5	0.	0.	0.
8	5.5	10.3	0.0	0.0	0.0	0.0	20.3	34.7	0.	0.	0.
9	5.3	10.4	0.0	0.0	0.0	0.0	21.1	31.5	0.	0.	0.
10	5.6	0.0	0.0	0.0	0.0	0.0	17.2	0.0	0.	0.	0.
11	5.4	0.0	0.0	0.0	0.0	0.0	14.9	0.0	0.	0.	0.
12	5.5	0.0	0.0	0.0	0.0	0.0	18.0	0.0	0.	0.	0.
13	5.7	10.2	0.0	0.0	0.0	0.0	28.1	37.5	0.	0.	0.
14	5.6	10.2	0.0	0.0	0.0	0.0	31.6	35.1	0.	0.	0.
15	5.4	10.3	0.0	0.0	0.0	0.0	24.0	40.0	0.	0.	0.
16	5.2	0.0	0.0	0.0	0.0	0.0	19.0	0.0	0.	0.	0.
17	5.4	9.6	0.0	0.0	0.0	0.0	12.2	0.0	0.	0.	0.
18	5.3	0.0	0.0	0.0	0.0	0.0	16.7	0.0	0.	0.	0.
19	5.5	10.2	0.0	0.0	0.0	0.0	30.5	39.9	0.	0.	0.
20	5.4	0.0	0.0	0.0	0.0	0.0	13.6	0.0	0.	0.	0.
MEAN	5.5	10.2	0.0	0.0	0.0	0.0	22.6	35.1	0.	0.	0.
STD DEV	.1	.3	0.0	0.0	0.0	0.0	6.3	6.7	0.	0.	0.

0.0 = NOT RECORDED

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     AGROPYRON SPICATUM      STUDY AREA  HORSE CK.            DATE 16   JUNE     1981
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  PLANT   PHENOLOGICAL           CLUMP              MAX.  MAX.   MAX.   NO.    NO.    NO.
   NO.    STAGE  SCORE   LGTH.   WIDTH      DIAM.  LEAF   LEAF   SPK    SPL/   REPR   VEG
          VEG.   REPR.                             WIDTH  HGHT   HGHT   CULM   CULM   CULM
*************************************************************************************************
    1     5.7    10.5     0.0     0.0        0.0    .4    25.5    4.8   0.     0.     0.
    2     5.8    10.5     0.0     0.0        0.0    .3    22.0   43.5   0.     0.     0.
    3     5.8    10.5     0.0     0.0        0.0    .4    23.4   45.0   0.     0.     0.
    4     5.7    10.3     0.0     0.0        0.0    .3    16.0   35.0   0.     0.     0.
    5     5.8    10.5     0.0     0.0        0.0    .3    28.5   47.0   0.     0.     0.
    6     5.8    10.5     0.0     0.0        0.0    .3    25.0   43.0   0.     0.     0.
    7     5.7    10.4     0.0     0.0        0.0    .3    24.5   46.0   0.     0.     0.
    8     5.8    10.5     0.0     0.0        0.0    .3    25.0   44.0   0.     0.     0.
    9     5.8    10.5     0.0     0.0        0.0    .3    26.0   48.0   0.     0.     0.
   10     5.8    10.6     0.0     0.0        0.0    .4    28.5   51.0   0.     0.     0.
   11     5.7     0.0     0.0     0.0        0.0    .3    15.7    0.0   0.     0.     0.
   12     5.7    10.5     0.0     0.0        0.0    .3    21.5   45.0   0.     0.     0.
   13     5.8    10.4     0.0     0.0        0.0    .3    27.5   45.0   0.     0.     0.
   14     5.8    10.5     0.0     0.0        0.0    .3    31.0   37.5   0.     0.     0.
   15     5.8    10.6     0.0     0.0        0.0    .3    27.7   54.0   0.     0.     0.
   16     5.6     0.0     0.0     0.0        0.0    .3    15.0    0.0   0.     0.     0.
   17     5.7     0.0     0.0     0.0        0.0    .3    13.5    0.0   0.     0.     0.
   18     5.7     0.0     0.0     0.0        0.0    .3    23.7    0.0   0.     0.     0.
   19     5.8    10.6     0.0     0.0        0.0    .3    29.5   43.0   0.     0.     0.
   20     5.7     0.0     0.0     0.0        0.0    .3    15.0    0.0   0.     0.     0.


  MEAN    5.7    10.5     0.0     0.0        0.0    .3    23.2   42.1   0.     0.     0.

STD DEV    .1      .1     0.0     0.0        0.0    .0     5.4   11.3   0.     0.     0.

0.0 = NOT RECORDED
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AGROPYRON SPICATUM   STUDY AREA HORSE CK.   DATE 29 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	6.0	13.5	0.0	0.0	0.0	.3	29.0	59.0	1.	60.	0.
2	6.0	13.5	0.0	0.0	0.0	.4	27.0	45.5	1.	45.	0.
3	6.0	14.0	0.0	0.0	0.0	.4	23.0	49.0	1.	25.	0.
4	6.0	14.0	0.0	0.0	0.0	.4	27.0	42.0	1.	10.	0.
5	6.0	14.0	0.0	0.0	0.0	.4	54.0	30.0	1.	25.	0.
6	5.9	14.5	0.0	0.0	0.0	.4	31.0	54.0	1.	25.	0.
7	6.0	14.0	0.0	0.0	0.0	.5	30.0	57.0	1.	15.	0.
8	5.8	14.5	0.0	0.0	0.0	.4	22.0	45.0	1.	35.	0.
9	5.9	13.9	0.0	0.0	0.0	.3	17.0	41.0	1.	1.	0.
10	5.9	14.5	0.0	0.0	0.0	.4	28.0	48.0	1.	15.	0.
11	5.9	0.0	0.0	0.0	0.0	.4	16.0	0.0	0.	0.	0.
12	5.8	13.0	0.0	0.0	0.0	.4	21.0	47.0	1.	1.	0.
13	6.1	16.0	0.0	0.0	0.0	.4	27.0	34.0	1.	3.	0.
14	6.0	12.8	0.0	0.0	0.0	.5	30.0	46.0	1.	2.	0.
15	6.0	14.5	0.0	0.0	0.0	.4	26.0	56.0	1.	20.	0.
16	5.9	0.0	0.0	0.0	0.0	.3	14.5	0.0	0.	0.	0.
17	5.9	0.0	0.0	0.0	0.0	.3	15.0	0.0	0.	0.	0.
18	5.9	0.0	0.0	0.0	0.0	.3	20.0	0.0	0.	0.	0.
19	5.9	14.5	0.0	0.0	0.0	.3	30.0	43.0	1.	3.	0.
20	5.9	0.0	0.0	0.0	0.0	.3	14.0	0.0	0.	0.	0.
MEAN	5.9	14.1	0.0	0.0	0.0	.4	25.1	46.4	1.	19.	0.
STD DEV	.1	.8	0.0	0.0	0.0	.1	8.9	8.1	0.	17.	0.

0.0 = NOT RECORDED

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      AGROPYRON SPICATUM     STUDY AREA  HORSE CK.           DATE 14   JULY    1981
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  PLANT  PHENOLOGICAL              CLUMP                MAX.  MAX.   MAX.   NO.    NO.    NO.
   NO.   STAGE SCORE     LGTH.     WIDTH      DIAM.  LEAF   LEAF   SPK    SPL/   REPR   VEG
         VEG.   REPR.                                WIDTH  HGHT   HGHT   CULM   CULM   CULM
***********************************************************************************************
    1    6.3    14.2     0.0       0.0        0.0    .3     24.5   57.0  12.     0.     0.   3" DEAD CENTER
    2    6.1    14.1     0.0       0.0        0.0    .3     24.5   44.7   6.     0.     0.   2" DEAD CENTER
    3    6.1    14.3     0.0       0.0        0.0    .3     24.0   45.0   6.     0.     0.   4" DEAD CENTER
    4    6.1    14.0     0.0       0.0        0.0    .2     18.5   32.6   2.     0.     0.   SMALL PLANT
    5    5.9    14.1     0.0       0.0        0.0    .3     24.3   54.5   8.     0.     0.
    6    6.0    14.0     0.0       0.0        0.0    .3     26.5   54.0   6.     0.     0.   3" DEAD CENTER
    7    6.2    14.0     0.0       0.0        0.0    .3     22.0   44.5   7.     0.     0.   SCATTERED STEMS
    8    6.0    14.5     0.0       0.0        0.0    .3     20.0   36.0   8.     0.     0.
    9    6.4    14.8     0.0       0.0        0.0    .3     20.0   34.5   5.     0.     0.
   10    5.9    14.8     0.0       0.0        0.0    .3     29.0   54.5   8.     0.     0.
   11    6.0     0.0     0.0       0.0        0.0    .3     14.1    0.0   0.     0.     0.
   12    6.0    14.8     0.0       0.0        0.0    .3     25.6   55.0   7.     0.     0.
   13    6.1    14.8     0.0       0.0        0.0    .3     27.6   45.0   7.     0.     0.
   14    6.1    14.0     0.0       0.0        0.0    .3     31.8   47.5   5.     0.     0.
   15    6.0    14.8     0.0       0.0        0.0    .3     24.8   53.5   9.     0.     0.   3" DEAD CENTER
   16    6.2     0.0     0.0       0.0        0.0    .3     15.2    0.0   0.     0.     0.
   17    6.2     0.0     0.0       0.0        0.0    .2     13.7    0.0   0.     0.     0.
   18    6.3     0.0     0.0       0.0        0.0    .2     13.8    0.0   0.     0.     0.
   19    6.1     0.0     0.0       0.0        0.0    .3     15.6    0.0   0.     0.     0.
   20    6.0     0.0     0.0       0.0        0.0    .2     15.3    0.0   0.     0.     0.

  MEAN   6.1    14.4     0.0       0.0        0.0    .3     21.5   47.0   7.     0.     0.

STD DEV   .1      .4     0.0       0.0        0.0    .0      5.6    8.2   2.     0.     0.

0.0 = NOT RECORDED
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AGROPYRON SPICATUM   STUDY AREA HORSE CK.   DATE 28 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	6.5	16.6	0.0	0.0	0.0	0.0	24.9	28.4	0.	30.	0.
2	6.4	16.5	0.0	0.0	0.0	0.0	23.2	46.4	0.	25.	0.
3	6.5	16.7	0.0	0.0	0.0	0.0	18.1	40.1	0.	10.	0.
4	6.3	16.3	0.0	0.0	0.0	0.0	18.7	33.0	0.	5.	0.
5	6.0	16.4	0.0	0.0	0.0	0.0	18.6	20.0	0.	3.	0.
6	6.2	16.2	0.0	0.0	0.0	0.0	30.4	61.0	0.	12.	0.
7	6.0	16.1	0.0	0.0	0.0	0.0	27.2	54.5	0.	7.	0.
8	6.0	16.0	0.0	0.0	0.0	0.0	16.0	36.0	0.	4.	0.
9	6.0	16.0	0.0	0.0	0.0	0.0	15.0	35.0	0.	6.	0.
10	6.0	16.3	0.0	0.0	0.0	0.0	25.6	42.0	0.	11.	0.
11	6.0	0.0	0.0	0.0	0.0	0.0	14.2	0.0	0.	0.	0.
12	6.0	16.5	0.0	0.0	0.0	0.0	18.3	12.3	0.	5.	0.
13	6.0	16.4	0.0	0.0	0.0	0.0	19.5	45.5	0.	10.	0.
14	6.0	16.3	0.0	0.0	0.0	0.0	21.5	32.0	0.	3.	0.
15	6.3	16.4	0.0	0.0	0.0	0.0	24.6	56.4	0.	16.	0.
16	6.0	9.9	0.0	0.0	0.0	0.0	24.5	0.0	0.	0.	0.
17	6.1	9.9	0.0	0.0	0.0	0.0	13.5	0.0	0.	0.	0.
18	6.2	9.9	0.0	0.0	0.0	0.0	18.0	0.0	0.	0.	0.
19	6.3	16.0	0.0	0.0	0.0	0.0	29.6	41.6	0.	4.	0.
20	6.3	9.9	0.0	0.0	0.0	0.0	13.2	0.0	0.	0.	0.
MEAN	6.2	15.0	0.0	0.0	0.0	0.0	20.7	38.9	0.	10.	0.
STD DEV	.2	2.7	0.0	0.0	0.0	0.0	5.3	13.2	0.	8.	0.

0.0 = NOT RECORDED

AGROPYRON SPICATUM   STUDY AREA HORSE CK.   DATE 11 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM	
1	6.5	16.5	0.0	0.0	0.0	.1	23.0	52.0	0.	0.	0.	
2	6.3	16.3	0.0	0.0	0.0	.3	24.3	45.5	0.	0.	0.	
3	6.3	16.3	0.0	0.0	0.0	.2	29.5	36.5	0.	0.	0.	
4	6.6	16.5	0.0	0.0	0.0	.1	10.0	33.0	0.	0.	0.	
5	6.3	18.0	0.0	0.0	0.0	.1	15.2	30.0	0.	0.	0.	
6	6.2	16.3	0.0	0.0	0.0	.2	26.0	56.0	0.	0.	0.	5 - 15% USE
7	6.3	16.5	0.0	0.0	0.0	.1	15.5	46.0	0.	0.	0.	MOSTLY BY
8	6.2	16.7	0.0	0.0	0.0	.2	14.5	28.0	0.	0.	0.	GRASSHOPPERS
9	6.3	16.7	0.0	0.0	0.0	.3	16.5	35.0	0.	0.	0.	
10	6.4	16.5	0.0	0.0	0.0	.3	23.0	38.0	0.	0.	0.	
11	6.5	0.0	0.0	0.0	0.0	.2	15.2	0.0	0.	0.	0.	
12	6.3	16.4	0.0	0.0	0.0	.2	25.5	45.0	0.	0.	0.	
13	6.4	16.7	0.0	0.0	0.0	.2	25.0	42.0	0.	0.	0.	
14	6.3	16.8	0.0	0.0	0.0	.3	19.0	27.0	0.	0.	0.	
15	6.4	16.4	0.0	0.0	0.0	.3	25.5	60.0	0.	0.	0.	
16	6.4	0.0	0.0	0.0	0.0	.2	15.5	0.0	0.	0.	0.	
17	6.7	0.0	0.0	0.0	0.0	.2	12.5	0.0	0.	0.	0.	
18	6.7	0.0	0.0	0.0	0.0	.2	18.0	0.0	0.	0.	0.	
19	6.3	16.3	0.0	0.0	0.0	.2	27.0	46.0	0.	0.	0.	
20	6.8	0.0	0.0	0.0	0.0	.2	10.0	0.0	0.	0.	0.	
MEAN	6.4	16.6	0.0	0.0	0.0	.2	19.5	41.3	0.	0.	0.	
STD DEV	.2	.4	0.0	0.0	0.0	.1	6.0	10.0	0.	0.	0.	

0.0 = NOT RECORDED

AGROPYRON SPICATUM   STUDY AREA HORSE CK.   DATE 25 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	6.5	16.9	0.0	0.0	0.0	.2	23.0	60.0	0.	0.	0.
2	6.5	16.9	0.0	0.0	0.0	.2	24.7	48.0	0.	0.	0.
3	6.5	16.9	0.0	0.0	0.0	.2	24.0	43.6	0.	0.	0.
4	6.5	16.9	0.0	0.0	0.0	.2	10.0	23.0	0.	0.	0.
5	6.5	16.9	0.0	0.0	0.0	.2	21.5	56.0	0.	0.	0.
6	6.5	16.9	0.0	0.0	0.0	.2	25.0	50.7	0.	0.	0.
7	6.5	16.9	0.0	0.0	0.0	.2	34.5	57.0	0.	0.	0.
8	6.5	16.9	0.0	0.0	0.0	.2	27.7	30.0	0.	0.	0.
9	6.5	0.0	0.0	0.0	0.0	.2	15.8	0.0	0.	0.	0.
10	6.5	16.9	0.0	0.0	0.0	.2	22.5	47.3	0.	0.	0.
11	6.5	0.0	0.0	0.0	0.0	.2	16.4	0.0	0.	0.	0.
12	6.5	16.9	0.0	0.0	0.0	.2	25.2	45.3	0.	0.	0.
13	6.5	16.9	0.0	0.0	0.0	.2	26.7	39.5	0.	0.	0.
14	6.5	16.9	0.0	0.0	0.0	.2	19.3	29.0	0.	0.	0.
15	6.5	16.9	0.0	0.0	0.0	.2	27.3	56.5	0.	0.	0.
16	6.5	0.0	0.0	0.0	0.0	.2	18.9	0.0	0.	0.	0.
17	6.5	0.0	0.0	0.0	0.0	.2	11.0	0.0	0.	0.	0.
18	6.5	0.0	0.0	0.0	0.0	.2	18.6	0.0	0.	0.	0.
19	6.5	0.0	0.0	0.0	0.0	.2	11.5	0.0	0.	0.	0.
20	6.5	0.0	0.0	0.0	0.0	.2	9.4	0.0	0.	0.	0.
MEAN	6.5	16.9	0.0	0.0	0.0	.2	20.7	45.1	0.	0.	0.
STD DEV	0.0	.0	0.0	0.0	0.0	.0	6.8	11.8	0.	0.	0.

0.0 = NOT RECORDED

AGROPYRON SPICATUM   STUDY AREA HORSE CK.   DATE 12 SEPT 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
2	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
3	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
4	7.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
5	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
6	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
7	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
8	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
9	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
10	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
11	6.9	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
12	6.9	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
13	6.9	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
14	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
15	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
16	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
17	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
18	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
19	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
20	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
MEAN	6.9	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
STD DEV	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.

0.0 = NOT RECORDED

AGROPYRON SPICATUM   STUDY AREA OWL DRAW   DATE 2 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	4.1	0.0	0.0	0.0	0.0	0.0	6.2	0.0	0.	0.	0.
2	4.1	0.0	0.0	0.0	0.0	0.0	5.1	0.0	0.	0.	0.
3	4.7	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.	0.	0.
4	4.4	0.0	0.0	0.0	0.0	0.0	7.0	0.0	0.	0.	0.
5	5.2	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.	0.	0.
6	3.9	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.	0.	0.
7	4.2	0.0	0.0	0.0	0.0	0.0	12.2	0.0	0.	0.	0.
8	4.4	0.0	0.0	0.0	0.0	0.0	8.1	0.0	0.	0.	0.
9	4.3	0.0	0.0	0.0	0.0	0.0	9.5	0.0	0.	0.	0.
10	4.2	0.0	0.0	0.0	0.0	0.0	9.0	0.0	0.	0.	0.
11	4.4	0.0	0.0	0.0	0.0	0.0	20.6	0.0	0.	0.	0.
12	4.7	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.	0.	0.
13	4.4	0.0	0.0	0.0	0.0	0.0	8.5	0.0	0.	0.	0.
14	4.8	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.	0.	0.
15	3.9	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.	0.	0.
16	4.6	0.0	0.0	0.0	0.0	0.0	6.6	0.0	0.	0.	0.
17	4.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.	0.	0.
18	4.8	0.0	0.0	0.0	0.0	0.0	6.8	0.0	0.	0.	0.
19	5.4	0.0	0.0	0.0	0.0	0.0	8.7	0.0	0.	0.	0.
20	4.2	0.0	0.0	0.0	0.0	0.0	5.1	0.0	0.	0.	0.
MEAN	4.4	0.0	0.0	0.0	0.0	0.0	7.6	0.0	0.	0.	0.
STD DEV	.4	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.	0.	0.

0.0 = NOT RECORDED

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     AGROPYRON SPICATUM     STUDY AREA  OWL DRAW            DATE 25   MAY      1981
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 PLANT  PHENOLOGICAL          CLUMP               MAX.  MAX.   MAX.   NO.    NO.    NO.
  NO.   STAGE SCORE   LGTH.   WIDTH    DIAM.  LEAF   LEAF   SPK    SPL/   REPR   VEG
        VEG.  REPR.                           WIDTH  HGHT   HGHT   CULM   CULM   CULM
*****************************************************************************************
   1     5.0    0.0     .1      .1      0.0    .3     8.0    0.0    0.     0.     1.
   2     5.2    0.0     .2      .2      0.0    .3    10.7    0.0    0.     0.     4.
   3     4.9    0.0     .1      .1      0.0    .3     9.7    0.0    0.     0.     1.
   4     5.2    0.0     .2      .2      0.0    .2     7.4    0.0    0.     0.     3.
   5     5.3    0.0   13.0     7.0      0.0    .3    15.0    0.0    0.     0.     5.
   6     4.0    0.0     .3      .3      0.0    .3    10.5    0.0    0.     0.     1.
   7     4.5    0.0     .3      .3      0.0    .3    13.0    0.0    0.     0.     1.
   8     4.7    0.0     .1      .1      0.0    .3    10.0    0.0    0.     0.     4.
   9     4.5    0.0     .3      .3      0.0    .2    13.0    0.0    0.     0.     1.
  10     4.4    0.0     .3      .3      0.0    .3    12.7    0.0    0.     0.     4.
  11     4.9    0.0     .3      .3      0.0    .3    21.0    0.0    0.     0.     1.
  12     4.8    0.0     .3      .3      0.0    .3     6.5    0.0    0.     0.     1.
  13     5.2    0.0    1.0     1.0      0.0    .3    13.6    0.0    0.     0.     3.
  14     4.9    0.0    1.5     1.0      0.0    .3     8.8    0.0    0.     0.     3.
  15     4.2    0.0    1.0      .5      0.0    .2     7.6    0.0    0.     0.     3.
  16     5.0    0.0     .3      .4      0.0    .3    11.6    0.0    0.     0.     2.
  17     4.5    0.0    3.0     1.0      0.0    .3    13.2    0.0    0.     0.     6.
  18     5.2    0.0    1.0      .3      0.0    .3    11.5    0.0    0.     0.     3.
  19     5.4    0.0    3.0      .2      0.0    .3    14.2    0.0    0.     0.     6.
  20     4.4    0.0     .8      .2      0.0    .3    11.4    0.0    0.     0.     1.

 MEAN    4.8    0.0    1.4      .7      0.0    .3    11.5    0.0    0.     0.     3.

STD DEV   .4    0.0    2.9     1.5      0.0    .0     3.3    0.0    0.     0.     2.

0.0 = NOT RECORDED
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     AGROPYRON SPICATUM      STUDY AREA  OWL DRAW           DATE 15   JUNE     1981
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                                                    MAX.   MAX.   MAX.   NO.    NO.    NO.
 PLANT   PHENOLOGICAL            CLUMP                      LEAF   LEAF   SPK    SPL/   REPR   VEG
  NO.    STAGE SCORE    LGTH.   WIDTH    DIAM.  LEAF   HGHT   HGHT   CULM   CULM   CULM
         VEG.  REPR.                                WIDTH
**********************************************************************************************
   1      5.7    0.0     2.5     1.0      0.0    .3     9.5    0.0    0.     0.     5.
   2      5.5    0.0     2.0     1.0      0.0    .2    10.5    0.0    0.     0.     5.
   3      5.6    0.0     1.5     1.0      0.0    .2    11.5    0.0    0.     0.     3.
   4      5.7    0.0     1.0     1.0      0.0    .2     9.5    0.0    0.     0.     4.
   5      5.6    0.0     1.7     1.7      0.0    .3    15.5    0.0    0.     0.    10.
   6      5.4    0.0      .4      .4      0.0    .2    12.5    0.0    0.     0.     1.
   7      5.5    0.0     3.4     1.5      0.0    .3    16.5    0.0    0.     0.     3.
   8      5.5    0.0     2.0      .5      0.0    .2    11.5    0.0    0.     0.     4.
   9      5.7    0.0      .3      .3      0.0    .3    16.7    0.0    0.     0.     1.   NO REPR CULMS
  10      5.6    0.0     1.0      .5      0.0    .2    15.7    0.0    0.     0.     4.   IN POPULATION
  11      5.7    0.0      .5      .5      0.0    .3    25.5    0.0    0.     0.     1.
  12      5.6    0.0     7.3     3.5      0.0    .3    23.2    0.0    0.     0.    20.
  13      5.7    0.0     4.5     3.0      0.0    .3    17.5    0.0    0.     0.    10.
  14      5.5    0.0     4.3     4.0      0.0    .3    10.5    0.0    0.     0.     7.
  15      5.7    0.0     2.7     2.0      0.0    .2    16.0    0.0    0.     0.     7.
  16      5.6    0.0     2.0     1.3      0.0    .2    10.0    0.0    0.     0.     4.
  17      5.6    0.0     3.5     3.5      0.0    .3    12.5    0.0    0.     0.    10.
  18      5.6    0.0     1.5      .7      0.0    .3    13.0    0.0    0.     0.     3.
  19      5.7    0.0     3.0     1.5      0.0    .2    15.1    0.0    0.     0.     7.
  20      5.6    0.0     8.0     7.0      0.0    .3    11.0    0.0    0.     0.    15.

 MEAN     5.6    0.0     2.7     1.8      0.0    .3    14.2    0.0    0.     0.     6.

STD DEV    .1    0.0     2.1     1.7      0.0    .1     4.4    0.0    0.     0.     5.

0.0 = NOT RECORDED
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AGROPYRON SPICATUM   STUDY AREA OWL DRAW   DATE 28 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	6.0	0.0	0.0	0.0	0.0	.3	10.8	0.0	0.	0.	9.
2	5.8	0.0	0.0	0.0	0.0	.2	13.0	0.0	0.	0.	5.
3	5.8	0.0	0.0	0.0	0.0	.2	11.5	0.0	0.	0.	3.
4	5.9	0.0	0.0	0.0	0.0	.2	15.1	0.0	0.	0.	3.
5	5.9	0.0	0.0	0.0	0.0	.2	17.6	0.0	0.	0.	20.
6	6.0	0.0	0.0	0.0	0.0	.1	17.8	0.0	0.	0.	1.
7	5.8	0.0	0.0	0.0	0.0	.1	16.9	0.0	0.	0.	1.
8	5.8	0.0	0.0	0.0	0.0	.1	14.1	0.0	0.	0.	4.
9	6.1	0.0	0.0	0.0	0.0	.2	19.7	0.0	0.	0.	2.
10	5.9	0.0	0.0	0.0	0.0	.2	16.4	0.0	0.	0.	4.
11	5.7	0.0	0.0	0.0	0.0	.2	16.8	0.0	0.	0.	1.
12	5.8	0.0	0.0	0.0	0.0	.3	14.6	0.0	0.	0.	20.
13	5.8	0.0	0.0	0.0	0.0	.2	18.2	0.0	0.	0.	10.
14	5.9	0.0	0.0	0.0	0.0	.2	11.5	0.0	0.	0.	7.
15	6.0	0.0	0.0	0.0	0.0	.2	8.0	0.0	0.	0.	4.
16	6.0	0.0	0.0	0.0	0.0	.2	11.6	0.0	0.	0.	3.
17	5.8	0.0	0.0	0.0	0.0	.2	14.0	0.0	0.	0.	10.
18	5.8	0.0	0.0	0.0	0.0	.2	13.4	0.0	0.	0.	3.
19	5.8	0.0	0.0	0.0	0.0	.2	14.3	0.0	0.	0.	7.
20	5.7	10.0	0.0	0.0	0.0	.3	13.0	0.0	0.	0.	15.
MEAN	5.9	10.0	0.0	0.0	0.0	.2	14.4	0.0	0.	0.	7.
STD DEV	.1	0.0	0.0	0.0	0.0	.1	2.9	0.0	0.	0.	6.

0.0 = NOT RECORDED

AGROPYRON SPICATUM   STUDY AREA OWL DRAW   DATE 13 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM	
1	6.0	0.0	0.0	0.0	0.0	.3	9.9	0.0	0.	0.	0.	LITTLE REPRO
2	5.9	0.0	0.0	0.0	0.0	.3	12.6	0.0	0.	0.	0.	IN AGSP POP.
3	6.1	0.0	0.0	0.0	0.0	.2	11.6	0.0	0.	0.	0.	
4	5.8	0.0	0.0	0.0	0.0	.2	14.8	0.0	0.	0.	0.	AVER REPRO
5	6.0	0.0	0.0	0.0	0.0	.4	16.2	0.0	0.	0.	0.	SCORE=15.5
6	6.0	0.0	0.0	0.0	0.0	.2	12.8	0.0	0.	0.	0.	
7	5.9	0.0	0.0	0.0	0.0	.2	15.7	0.0	0.	0.	0.	
8	6.1	0.0	0.0	0.0	0.0	.3	9.3	0.0	0.	0.	0.	
9	6.0	0.0	0.0	0.0	0.0	.3	13.2	0.0	0.	0.	0.	
10	6.1	0.0	0.0	0.0	0.0	.2	15.6	0.0	0.	0.	0.	
11	6.0	0.0	0.0	0.0	0.0	.3	21.5	0.0	0.	0.	0.	
12	6.0	0.0	0.0	0.0	0.0	.2	11.6	0.0	0.	0.	0.	
13	6.1	0.0	0.0	0.0	0.0	.3	17.4	0.0	0.	0.	0.	
14	5.9	0.0	0.0	0.0	0.0	.4	11.4	0.0	0.	0.	0.	
15	6.0	0.0	0.0	0.0	0.0	.2	8.4	0.0	0.	0.	0.	
16	6.2	0.0	0.0	0.0	0.0	.2	12.0	0.0	0.	0.	0.	
17	6.2	0.0	0.0	0.0	0.0	.4	12.9	0.0	0.	0.	0.	
18	5.9	0.0	0.0	0.0	0.0	.3	12.6	0.0	0.	0.	0.	
19	5.9	0.0	0.0	0.0	0.0	.2	15.0	0.0	0.	0.	0.	
20	6.2	0.0	0.0	0.0	0.0	.2	12.6	0.0	0.	0.	0.	
MEAN	6.0	0.0	0.0	0.0	0.0	.3	13.4	0.0	0.	0.	0.	
STD DEV	.1	0.0	0.0	0.0	0.0	.1	3.0	0.0	0.	0.	0.	

0.0 = NOT RECORDED

AGROPYRON SPICATUM   STUDY AREA OWL DRAW   DATE 27 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	6.0	0.0	0.0	0.0	0.0	0.0	10.2	0.0	0.	0.	0.
2	6.1	0.0	0.0	0.0	0.0	0.0	9.5	0.0	0.	0.	0.
3	6.0	0.0	0.0	0.0	0.0	0.0	11.4	0.0	0.	0.	0.
4	6.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0	0.	0.	0.
5	6.2	0.0	0.0	0.0	0.0	0.0	16.5	0.0	0.	0.	0.
6	6.1	0.0	0.0	0.0	0.0	0.0	14.4	0.0	0.	0.	0.
7	6.5	0.0	0.0	0.0	0.0	0.0	13.4	0.0	0.	0.	0.
8	6.1	0.0	0.0	0.0	0.0	0.0	22.5	0.0	0.	0.	0.
9	6.1	0.0	0.0	0.0	0.0	0.0	17.0	0.0	0.	0.	0.
10	6.4	0.0	0.0	0.0	0.0	0.0	16.2	0.0	0.	0.	0.
11	6.3	0.0	0.0	0.0	0.0	0.0	13.0	0.0	0.	0.	0.
12	6.5	0.0	0.0	0.0	0.0	0.0	15.5	0.0	0.	0.	0.
13	6.1	0.0	0.0	0.0	0.0	0.0	18.5	0.0	0.	0.	0.
14	6.1	0.0	0.0	0.0	0.0	0.0	12.0	0.0	0.	0.	0.
15	6.2	0.0	0.0	0.0	0.0	0.0	8.5	0.0	0.	0.	0.
16	6.0	0.0	0.0	0.0	0.0	0.0	9.0	0.0	0.	0.	0.
17	6.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0	0.	0.	0.
18	6.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0	0.	0.	0.
19	6.5	0.0	0.0	0.0	0.0	0.0	20.6	0.0	0.	0.	0.
20	6.4	0.0	0.0	0.0	0.0	0.0	12.0	0.0	0.	0.	0.
MEAN	6.2	0.0	0.0	0.0	0.0	0.0	14.3	0.0	0.	0.	0.
STD DEV	.2	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.	0.	0.

0.0 = NOT RECORDED

AGROPYRON SPICATUM   STUDY AREA OWL DRAW   DATE 10 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	6.9	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.	0.	0.
2	6.5	0.0	0.0	0.0	0.0	0.0	13.0	0.0	0.	0.	0.
3	6.1	0.0	0.0	0.0	0.0	0.0	12.0	0.0	0.	0.	0.
4	6.1	0.0	0.0	0.0	0.0	0.0	13.0	0.0	0.	0.	0.
5	6.1	16.0	0.0	0.0	0.0	0.0	28.5	23.0	0.	0.	0.
6	6.1	0.0	0.0	0.0	0.0	0.0	13.0	0.0	0.	0.	0.
7	6.2	0.0	0.0	0.0	0.0	0.0	16.5	0.0	0.	0.	0.
8	6.1	0.0	0.0	0.0	0.0	0.0	11.0	0.0	0.	0.	0.
9	6.1	0.0	0.0	0.0	0.0	0.0	13.5	0.0	0.	0.	0.
10	6.2	0.0	0.0	0.0	0.0	0.0	16.0	0.0	0.	0.	0.
11	6.0	0.0	0.0	0.0	0.0	0.0	21.0	0.0	0.	0.	0.
12	6.3	0.0	0.0	0.0	0.0	0.0	11.5	0.0	0.	0.	0.
13	6.1	0.0	0.0	0.0	0.0	0.0	18.5	0.0	0.	0.	0.
14	6.1	0.0	0.0	0.0	0.0	0.0	15.0	0.0	0.	0.	0.
15	6.2	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.	0.	0.
16	6.2	0.0	0.0	0.0	0.0	0.0	12.0	0.0	0.	0.	0.
17	6.2	0.0	0.0	0.0	0.0	0.0	13.0	0.0	0.	0.	0.
18	6.2	0.0	0.0	0.0	0.0	0.0	13.0	0.0	0.	0.	0.
19	6.4	0.0	0.0	0.0	0.0	0.0	16.5	0.0	0.	0.	0.
20	6.3	0.0	0.0	0.0	0.0	0.0	11.0	0.0	0.	0.	0.
MEAN	6.2	16.0	0.0	0.0	0.0	0.0	14.1	23.0	0.	0.	0.
STD DEV	.2	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.	0.	0.

0.0 = NOT RECORDED

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     AGROPYRON SPICATUM     STUDY AREA  OWL DRAW              DATE 24   AUGUST  1981
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 PLANT  PHENOLOGICAL           CLUMP                MAX. MAX.  MAX.  NO.   NO.   NO.
  NO.   STAGE SCORE   LGTH.   WIDTH    DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
        VEG.  REPR.                          WIDTH HGHT  HGHT  CULM  CULM  CULM
**************************************************************************************
   1    6.4    0.0    0.0     0.0      0.0   0.0   10.5   0.0  0.    0.    0.
   2    6.4    0.0    0.0     0.0      0.0   0.0   12.8   0.0  0.    0.    0.
   3    6.5    0.0    0.0     0.0      0.0   0.0   10.6   0.0  0.    0.    0.
   4    6.4    0.0    0.0     0.0      0.0   0.0   15.6   0.0  0.    0.    0.
   5    6.5   16.9    0.0     0.0      0.0   0.0   22.0  28.1  0.    0.    0.
   6    6.4    0.0    0.0     0.0      0.0   0.0   14.2   0.0  0.    0.    0.
   7    6.4    0.0    0.0     0.0      0.0   0.0   16.5   0.0  0.    0.    0.
   8    6.4    0.0    0.0     0.0      0.0   0.0   22.5   0.0  0.    0.    0.
   9    6.5    0.0    0.0     0.0      0.0   0.0   14.1   0.0  0.    0.    0.
  10    6.5    0.0    0.0     0.0      0.0   0.0   12.5   0.0  0.    0.    0.
  11    6.4    0.0    0.0     0.0      0.0   0.0   22.3   0.0  0.    0.    0.
  12    6.5    0.0    0.0     0.0      0.0   0.0   14.9   0.0  0.    0.    0.
  13    6.4    0.0    0.0     0.0      0.0   0.0   15.3   0.0  0.    0.    0.
  14    6.5    0.0    0.0     0.0      0.0   0.0   14.7   0.0  0.    0.    0.
  15    6.5    0.0    0.0     0.0      0.0   0.0    9.9   0.0  0.    0.    0.
  16    6.5    0.0    0.0     0.0      0.0   0.0   12.1   0.0  0.    0.    0.
  17    6.5    0.0    0.0     0.0      0.0   0.0   10.1   0.0  0.    0.    0.
  18    6.5    0.0    0.0     0.0      0.0   0.0   13.6   0.0  0.    0.    0.
  19    6.5    0.0    0.0     0.0      0.0   0.0   15.5   0.0  0.    0.    0.
  20    6.5    0.0    0.0     0.0      0.0   0.0   11.7   0.0  0.    0.    0.


 MEAN   6.5   16.9    0.0     0.0      0.0   0.0   14.6  28.1  0.    0.    0.

STD DEV  .1    0.0    0.0     0.0      0.0   0.0    3.8   0.0  0.    0.    0.

0.0 = NOT RECORDED
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AGROPYRON SPICATUM   STUDY AREA OWL DRAW   DATE 11 SEPT 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	6.7	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
2	6.8	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
3	6.5	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
4	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
5	6.7	16.8	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
6	6.8	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
7	6.8	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
8	6.8	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
9	6.9	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
10	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
11	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
12	6.8	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
13	6.7	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
14	6.6	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
15	6.7	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
16	6.8	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
17	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
18	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
19	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
20	6.8	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
MEAN	6.8	17.7	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
STD DEV	.1	.5	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.

0.0 = NOT RECORDED

AGROPYRON SPICATUM STUDY AREA RED WASH DATE 01 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	4.3	0.0	54.0	32.0	0.0	.2	16.4	0.0	0.	0.	0.
2	4.4	0.0	80.0	33.0	0.0	.2	10.8	0.0	0.	0.	0.
3	4.1	0.0	93.0	70.0	0.0	.2	15.1	0.0	0.	0.	0.
4	4.6	0.0	76.0	30.0	0.0	.2	20.1	0.0	0.	0.	0.
5	4.7	0.0	55.0	48.0	0.0	.3	15.5	0.0	0.	0.	0.
6	4.5	0.0	15.0	10.0	0.0	.2	14.7	0.0	0.	0.	0.
7	4.7	0.0	22.0	10.0	0.0	.2	19.2	0.0	0.	0.	0.
8	4.8	0.0	14.0	6.0	0.0	.3	21.4	0.0	0.	0.	0.
9	5.0	0.0	49.0	15.0	0.0	.2	13.0	0.0	0.	0.	0.
10	4.2	0.0	9.0	5.0	0.0	.2	9.5	0.0	0.	0.	0.
11	4.6	0.0	20.0	11.0	0.0	.2	13.5	0.0	0.	0.	0.
12	4.5	0.0	35.0	18.0	0.0	.2	15.0	0.0	0.	0.	0.
13	4.7	0.0	67.0	48.0	0.0	.3	15.5	0.0	0.	0.	0.
14	4.2	0.0	67.0	28.0	0.0	.2	15.3	0.0	0.	0.	0.
15	4.6	0.0	13.0	8.0	0.0	.3	15.6	0.0	0.	0.	0.
16	4.4	0.0	10.0	6.0	0.0	.2	11.5	0.0	0.	0.	0.
17	4.6	0.0	40.0	29.0	0.0	.3	19.1	0.0	0.	0.	0.
18	4.7	0.0	26.1	11.0	0.0	.2	10.1	0.0	0.	0.	0.
19	4.5	0.0	23.0	21.0	0.0	.2	14.8	0.0	0.	0.	0.
20	4.8	0.0	29.0	12.0	0.0	.2	19.1	0.0	0.	0.	0.
MEAN.	4.5	0.0	39.9	22.6	0.0	.2	15.3	0.0	0.	0.	0.
STD DEV	.2	0.0	26.1	17.3	0.0	.0	3.3	0.0	0.	0.	0.

0.0 = NOT RECORDED

AGROPYRON SPICATUM   STUDY AREA RED WASH   DATE 04 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	5.7	10.0	19.5	19.0	0.0	0.0	25.0	0.0	0.	0.	80.
2	5.3	9.9	7.0	5.0	0.0	0.0	18.3	0.0	0.	0.	15.
3	5.6	9.0	8.0	69.0	0.0	0.0	24.0	0.0	0.	0.	500.
4	5.4	10.0	30.0	25.0	0.0	0.0	37.5	0.0	0.	0.	300.
5	5.4	10.1	58.0	49.0	0.0	0.0	32.9	0.0	0.	0.	520.
6	5.5	10.0	6.0	4.0	0.0	0.0	20.5	0.0	0.	0.	10.
7	5.7	10.2	16.0	14.5	0.0	0.0	29.0	0.0	0.	0.	50.
8	5.8	9.9	20.0	17.0	0.0	0.0	29.0	0.0	0.	0.	40.
9	5.5	9.9	90.0	60.0	0.0	0.0	30.0	0.0	0.	0.	500.
10	5.4	9.9	25.0	12.0	0.0	0.0	23.0	0.0	0.	0.	40.
11	5.7	9.9	14.0	8.0	0.0	0.0	17.5	0.0	0.	0.	20.
12	5.3	9.8	37.0	8.0	0.0	0.0	27.0	0.0	0.	0.	100.
13	5.2	10.0	5.5	4.0	0.0	0.0	14.5	0.0	0.	0.	20.
14	5.6	9.9	90.0	76.0	0.0	0.0	29.5	0.0	0.	0.	350.
15	5.7	9.9	30.0	8.0	0.0	0.0	30.5	0.0	0.	0.	40.
16	5.6	10.0	15.0	8.0	0.0	0.0	22.5	0.0	0.	0.	45.
17	5.7	10.0	48.0	30.0	0.0	0.0	27.0	0.0	0.	0.	200.
18	5.7	9.1	23.0	19.0	0.0	0.0	24.0	0.0	0.	0.	45.
19	5.8	10.0	22.0	9.0	0.0	0.0	23.0	0.0	0.	0.	40.
20	5.4	10.1	15.0	12.0	0.0	0.0	24.5	0.0	0.	0.	30.
MEAN	5.5	9.9	29.0	22.8	0.0	0.0	25.5	0.0	0.	0.	147.
STD DEV	.2	.3	24.9	22.4	0.0	0.0	5.5	0.0	0.	0.	181.

0.0 = NOT RECORDED

AGROPYRON SPICATUM STUDY AREA RED WASH DATE 15 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM	
1	5.8	10.5	0.0	0.0	0.0	0.0	38.6	45.8	0.	25.	0.	
2	5.3	10.1	0.0	0.0	0.0	0.0	25.1	24.9	0.	1.	0.	
3	5.6	9.0	0.0	0.0	0.0	0.0	30.4	0.0	0.	0.	0.	
4	5.7	10.2	0.0	0.0	0.0	0.0	51.0	42.5	0.	5.	0.	
5	5.4	10.3	0.0	0.0	0.0	0.0	44.0	36.5	0.	10.	0.	
6	5.5	10.4	0.0	0.0	0.0	0.0	38.8	41.0	0.	4.	0.	
7	5.7	10.4	0.0	0.0	0.0	0.0	35.3	44.0	0.	11.	0.	
8	5.9	10.1	0.0	0.0	0.0	0.0	39.8	37.0	0.	2.	0.	
9	5.7	10.4	0.0	0.0	0.0	0.0	38.0	47.8	0.	15.	0.	
10	5.5	9.0	0.0	0.0	0.0	0.0	30.0	0.0	0.	0.	0.	NEW PLANT
11	5.7	9.9	0.0	0.0	0.0	0.0	23.9	0.0	0.	0.	0.	
12	5.5	9.9	0.0	0.0	0.0	0.0	29.5	0.0	0.	0.	0.	
13	5.4	10.3	0.0	0.0	0.0	0.0	41.5	40.5	0.	20.	0.	
14	5.6	10.3	0.0	0.0	0.0	0.0	44.0	42.0	0.	10.	0.	
15	5.7	9.9	0.0	0.0	0.0	0.0	33.0	0.0	0.	0.	0.	
16	5.6	10.4	0.0	0.0	0.0	0.0	38.5	40.8	0.	20.	0.	
17	5.7	10.5	0.0	0.0	0.0	0.0	38.9	40.3	0.	50.	0.	
18	5.7	9.9	0.0	0.0	0.0	0.0	21.0	0.0	0.	0.	0.	
19	5.8	10.4	0.0	0.0	0.0	0.0	40.0	44.0	0.	10.	0.	
20	5.8	10.5	0.0	0.0	0.0	0.0	43.7	45.8	0.	5.	0.	
MEAN	5.6	10.1	0.0	0.0	0.0	0.0	36.3	40.9	0.	13.	0.	
STD DEV	.2	.4	0.0	0.0	0.0	0.0	7.7	5.6	0.	13.	0.	

0.0 = NOT RECORDED

AGROPYRON SPICATUM   STUDY AREA RED WASH   DATE 29 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	5.8	10.6	0.0	0.0	0.0	0.0	41.9	52.0	0.	40.	0.
2	5.6	9.9	0.0	0.0	0.0	0.0	42.0	0.0	0.	0.	0.
3	5.6	10.0	0.0	0.0	0.0	0.0	42.6	0.0	0.	0.	0.
4	5.7	10.6	0.0	0.0	0.0	0.0	48.1	55.9	0.	5.	0.
5	5.7	10.6	0.0	0.0	0.0	0.0	45.0	59.0	0.	55.	0.
6	5.5	9.9	0.0	0.0	0.0	0.0	25.4	0.0	0.	0.	0.
7	5.7	10.6	0.0	0.0	0.0	0.0	33.0	47.7	0.	10.	0.
8	5.9	10.1	0.0	0.0	0.0	0.0	25.1	23.0	0.	3.	0.
9	5.7	10.5	0.0	0.0	0.0	0.0	42.0	53.5	0.	20.	0.
10	5.5	9.9	0.0	0.0	0.0	0.0	32.0	0.0	0.	0.	0.
11	5.8	9.8	0.0	0.0	0.0	0.0	21.0	0.0	0.	0.	0.
12	5.5	9.8	0.0	0.0	0.0	0.0	26.1	0.0	0.	0.	0.
13	5.8	10.5	0.0	0.0	0.0	0.0	45.0	49.7	0.	60.	0.
14	5.6	10.5	0.0	0.0	0.0	0.0	39.5	49.2	0.	15.	0.
15	5.5	10.3	0.0	0.0	0.0	0.0	35.0	50.0	0.	10.	0.
16	5.6	10.7	0.0	0.0	0.0	0.0	41.5	52.7	0.	35.	0.
17	5.8	10.7	0.0	0.0	0.0	0.0	33.0	45.4	0.	70.	0.
18	5.4	9.7	0.0	0.0	0.0	0.0	26.3	0.0	0.	0.	0.
19	5.8	10.4	0.0	0.0	0.0	0.0	41.2	54.3	0.	5.	0.
20	5.8	10.2	0.0	0.0	0.0	0.0	30.4	33.1	0.	3.	0.
MEAN	5.7	10.3	0.0	0.0	0.0	0.0	35.8	48.1	0.	25.	0.
STD DEV	.1	.3	0.0	0.0	0.0	0.0	8.1	9.8	0.	24.	0.

0.0 = NOT RECORDED

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     AGROPYRON SPICATUM    STUDY AREA  RED WASH            DATE 13   JULY    1981
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PLANT   PHENOLOGICAL          CLUMP                MAX. MAX.   MAX.   NO.    NO.    NO.
  NO.   STAGE SCORE   LGTH.   WIDTH     DIAM. LEAF  LEAF   SPK    SPL/   REPR   VEG
        VEG.  REPR.                          WIDTH  HGHT   HGHT   CULM   CULM   CULM
**************************************************************************************
   1     4.6   15.2    0.0     0.0       0.0   .3    21.5   43.0  0.     0.     0.
   2     4.0    0.0    0.0     0.0       0.0   .2    18.0    0.0  0.     0.     0.
   3     6.0    0.0    0.0     0.0       0.0   .4    26.0    0.0  0.     0.     0.
   4     6.0   15.2    0.0     0.0       0.0   .3    31.0   58.0  0.     0.     0.
   5     6.0   15.0    0.0     0.0       0.0   .3    28.0   45.0  0.     0.     0.
   6     6.0   15.5    0.0     0.0       0.0   .3    23.5   53.0  0.     0.     0.
   7     6.0   15.2    0.0     0.0       0.0   .3    28.5   55.0  0.     0.     0.
   8     6.0    0.0    0.0     0.0       0.0   .4    25.0    0.0  0.     0.     0.
   9     6.0   15.2    0.0     0.0       0.0   .4    21.0   57.0  0.     0.     0.
  10     6.0    0.0    0.0     0.0       0.0   .3    24.0    0.0  0.     0.     0.
  11     6.0    0.0    0.0     0.0       0.0   .3    15.5    0.0  0.     0.     0.
  12     6.0    0.0    0.0     0.0       0.0   .3    29.0    0.0  0.     0.     0.
  13     6.0   15.0    0.0     0.0       0.0   .3    25.0   59.5  0.     0.     0.
  14     6.0    0.0    0.0     0.0       0.0   .2    20.0    0.0  0.     0.     0.
  15     6.0    0.0    0.0     0.0       0.0   .3    27.0    0.0  0.     0.     0.
  16     6.0   15.0    0.0     0.0       0.0   .3    24.0   48.0  0.     0.     0.
  17     6.0   15.1    0.0     0.0       0.0   .3    27.0   46.0  0.     0.     0.
  18     6.0    0.0    0.0     0.0       0.0   .2    15.5    0.0  0.     0.     0.
  19     6.0   15.3    0.0     0.0       0.0   .3    24.0   55.0  0.     0.     0.
  20     6.0    0.0    0.0     0.0       0.0   .3    24.0    0.0  0.     0.     0.


 MEAN    5.8   15.2    0.0     0.0       0.0   .3    23.9   52.0  0.     0.     0.

STD DEV   .5     .2    0.0     0.0       0.0   .1     4.3    5.9  0.     0.     0.

0.0 = NOT RECORDED
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    AGROPYRON SPICATUM    STUDY AREA  RED WASH             DATE 27    JULY     1981
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PLANT  PHENOLOGICAL            CLUMP             MAX.  MAX.   MAX.   NO.    NO.    NO.
 NO.   STAGE SCORE    LGTH.    WIDTH    DIAM.  LEAF   LEAF   SPK    SPL/   REPR   VEG
       VEG.  REPR.                              WIDTH  HGHT   HGHT   CULM   CULM   CULM
*******************************************************************************************
  1     6.0   15.5     0.0      0.0      0.0    .2    37.5   52.2   0.     0.     0.
  2     6.0   16.2     0.0      0.0      0.0    .2    30.5   25.5   0.     0.     0.
  3     6.0    0.0     0.0      0.0      0.0    .2    28.2    0.0   0.     0.     0.
  4     6.0   15.5     0.0      0.0      0.0    .2    45.0   57.0   0.     0.     0.
  5     6.1   16.2     0.0      0.0      0.0    .2    40.0   51.0   0.     0.     0.
  6     6.2   15.5     0.0      0.0      0.0    .2    34.0   37.0   0.     0.     0.
  7     6.0   15.0     0.0      0.0      0.0    .2    32.0   48.5   0.     0.     0.
  8     6.3   16.0     0.0      0.0      0.0    .1    16.8    9.5   0.     0.     0.
  9     6.0   16.0     0.0      0.0      0.0    .3    35.8   45.5   0.     0.     0.
 10     6.1    0.0     0.0      0.0      0.0    .2    27.8    0.0   0.     0.     0.
 11     6.1    0.0     0.0      0.0      0.0    .1    18.6    0.0   0.     0.     0.
 12     6.1    0.0     0.0      0.0      0.0    .2    27.4    0.0   0.     0.     0.
 13     6.0   16.0     0.0      0.0      0.0    .2    35.4   53.3   0.     0.     0.
 14     6.0   16.0     0.0      0.0      0.0    .3    53.0   57.5   0.     0.     0.
 15     6.1   16.5     0.0      0.0      0.0    .2    33.5   48.0   0.     0.     0.
 16     6.0   16.2     0.0      0.0      0.0    .2    41.5   53.0   0.     0.     0.
 17     6.1   16.2     0.0      0.0      0.0    .2    39.6   46.3   0.     0.     0.
 18     6.1   16.0     0.0      0.0      0.0    .2    20.0   23.5   0.     0.     0.
 19     6.0   16.0     0.0      0.0      0.0    .2    37.3   50.5   0.     0.     0.
 20     6.1   16.0     0.0      0.0      0.0    .3    43.5   58.0   0.     0.     0.


 MEAN   6.1   15.9     0.0      0.0      0.0    .2    33.9   44.8   0.     0.     0.

STD DEV  .1     .4     0.0      0.0      0.0    .1     9.1   13.9   0.     0.     0.

0.0 = NOT RECORDED
```

AGROPYRON SPICATUM   STUDY AREA RED WASH   DATE 10 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM	
1	6.3	16.9	0.0	0.0	0.0	.1	45.0	46.8	7.	0.	0.	
2	6.5	17.0	0.0	0.0	0.0	.2	33.0	50.0	0.	0.	0.	
3	6.5	0.0	0.0	0.0	0.0	.2	31.0	0.0	0.	0.	0.	
4	6.7	16.9	0.0	0.0	0.0	.2	45.0	26.6	3.	0.	0.	
5	6.6	16.9	0.0	0.0	0.0	.2	47.0	53.0	5.	0.	0.	
6	6.5	16.9	0.0	0.0	0.0	.2	28.0	39.0	8.	0.	0.	
7	6.5	16.9	0.0	0.0	0.0	.1	29.0	46.8	6.	0.	0.	
8	6.5	14.0	0.0	0.0	0.0	.2	24.5	24.5	1.	0.	0.	
9	6.4	16.9	0.0	0.0	0.0	.2	27.0	50.2	7.	0.	0.	
10	6.4	0.0	0.0	0.0	0.0	.2	30.0	0.0	0.	0.	0.	SPIKELETS
11	6.4	0.0	0.0	0.0	0.0	.2	19.0	0.0	0.	0.	0.	SHATTERED
12	6.5	0.0	0.0	0.0	0.0	.2	24.8	0.0	0.	0.	0.	
13	6.4	16.9	0.0	0.0	0.0	.3	33.0	47.0	5.	0.	0.	
14	6.4	16.9	0.0	0.0	0.0	.3	31.0	53.0	7.	0.	0.	
15	6.4	16.9	0.0	0.0	0.0	.2	24.0	49.0	6.	0.	0.	
16	6.5	16.9	0.0	0.0	0.0	.2	29.0	56.0	6.	0.	0.	
17	6.5	16.9	0.0	0.0	0.0	.2	35.0	44.0	7.	0.	0.	
18	6.3	13.5	0.0	0.0	0.0	.2	20.0	24.0	5.	0.	0.	
19	6.4	16.9	0.0	0.0	0.0	.2	27.0	50.0	6.	0.	0.	
20	6.4	16.9	0.0	0.0	0.0	.2	32.0	51.0	7.	0.	0.	
MEAN	6.5	16.5	0.0	0.0	0.0	.2	30.7	44.4	6.	0.	0.	
STD DEV	.1	1.1	0.0	0.0	0.0	.0	7.7	10.4	2.	0.	0.	

0.0 = NOT RECORDED

AGROPYRON SPICATUM STUDY AREA RED WASH DATE 25 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	6.5	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.	0.	0.
2	6.5	16.9	0.0	4.0	0.0	0.0	0.0	0.0	0.	0.	0.
3	6.5	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.	0.	0.
4	6.3	16.5	0.0	3.0	0.0	0.0	0.0	0.0	0.	0.	0.
5	6.5	16.8	0.0	4.0	.5	0.0	0.0	0.0	0.	0.	0.
6	6.3	16.4	0.0	4.0	.5	0.0	0.0	0.0	0.	0.	0.
7	6.5	0.0	0.0	.8	0.0	0.0	0.0	0.0	0.	0.	0.
8	6.5	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.	0.	0.
9	6.5	16.3	0.0	0.0	.7	0.0	0.0	0.0	0.	0.	0.
10	6.3	0.0	0.0	5.8	0.0	0.0	0.0	0.0	0.	0.	0.
11	6.5	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.	0.	0.
12	6.5	0.0	0.0	6.4	0.0	0.0	0.0	0.0	0.	0.	0.
13	6.5	16.1	0.0	3.0	0.0	0.0	0.0	0.0	0.	0.	0.
14	6.5	16.6	0.0	0.0	.5	0.0	0.0	0.0	0.	0.	0.
15	6.5	16.3	0.0	4.0	.5	0.0	0.0	0.0	0.	0.	0.
16	6.5	16.5	0.0	3.5	.7	0.0	0.0	0.0	0.	0.	0.
17	6.5	16.5	0.0	8.5	.5	0.0	0.0	0.0	0.	0.	0.
18	6.5	16.5	0.0	.4	.3	0.0	0.0	0.0	0.	0.	0.
19	6.5	16.6	0.0	8.0	.4	0.0	0.0	0.0	0.	0.	0.
20	6.5	16.5	0.0	5.3	.5	0.0	0.0	0.0	0.	0.	0.
MEAN	6.5	16.5	0.0	3.8	.5	0.0	0.0	0.0	0.	0.	0.
STD DEV	.1	.2	0.0	2.3	.1	0.0	0.0	0.0	0.	0.	0.

0.0 = NOT RECORDED

AGROPYRON SPICATUM   STUDY AREA RED WASH   DATE 13 SEPT 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	6.5	16.9	0.0	0.0	0.0	0.0	42.0	50.2	0.	0.	0.
2	6.5	0.0	0.0	0.0	0.0	0.0	42.0	0.0	0.	0.	0.
3	6.5	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.	0.	0.
4	6.5	16.8	0.0	0.0	0.0	0.0	45.6	58.0	0.	0.	0.
5	6.4	16.8	0.0	0.0	0.0	0.0	48.0	57.3	0.	0.	0.
6	6.5	0.0	0.0	0.0	0.0	0.0	29.0	0.0	0.	0.	0.
7	6.4	0.0	0.0	0.0	0.0	0.0	20.5	0.0	0.	0.	0.
8	6.5	0.0	0.0	0.0	0.0	0.0	25.4	0.0	0.	0.	0.
9	6.5	16.0	0.0	0.0	0.0	0.0	33.0	53.0	0.	0.	0.
10	6.5	0.0	0.0	0.0	0.0	0.0	32.0	0.0	0.	0.	0.
11	6.6	0.0	0.0	0.0	0.0	0.0	24.8	0.0	0.	0.	0.
12	6.5	0.0	0.0	0.0	0.0	0.0	33.0	36.0	0.	0.	0.
13	6.7	16.9	0.0	0.0	0.0	0.0	28.0	41.0	0.	0.	0.
14	6.5	16.8	0.0	0.0	0.0	0.0	50.0	59.5	0.	0.	0.
15	6.6	16.5	0.0	0.0	0.0	0.0	36.0	51.0	0.	0.	0.
16	6.5	16.5	0.0	0.0	0.0	0.0	39.0	55.5	0.	0.	0.
17	6.5	16.1	0.0	0.0	0.0	0.0	41.0	46.5	0.	0.	0.
18	6.3	16.6	0.0	0.0	0.0	0.0	23.5	22.5	0.	0.	0.
19	6.5	16.7	0.0	0.0	0.0	0.0	50.0	58.0	0.	0.	0.
20	6.5	16.5	0.0	0.0	0.0	0.0	45.5	56.0	0.	0.	0.
MEAN	6.5	16.6	0.0	0.0	0.0	0.0	35.9	49.6	0.	0.	0.
STD DEV	.1	.3	0.0	0.0	0.0	0.0	9.3	10.8	0.	0.	0.

0.0 = NOT RECORDED

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ARTEMISIA NOVA        STUDY AREA HORSE CK.           DATE  2  MAY     1981
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PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW    NEW
NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH  VEG.   SEED
       VEG.  REPR.                              CLASS  PERCENT TWIG   STALK
                                                               LNGTH  LNGTH
*******************************************************************************
  1    2.9   9.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
  2    3.0   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
  3    3.0   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
  4    2.9   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
  5    3.0   9.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
  6    2.9   9.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
  7    2.8   9.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
  8    2.8   9.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
  9    2.8   9.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 10    2.8   9.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 11    2.9   9.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 12    2.9   9.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 13    2.7   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 14    3.2   9.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 15    2.9   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 16    3.0   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0 DECADENT
 17    2.6   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 18    2.7   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 19    3.0   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 20    3.0   9.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0


  MEAN  2.9  9.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0

STD DEV  .1  0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0


 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
 ARTEMISIA NOVA          STUDY AREA HORSE CK.           DATE 19  MAY        1981
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 PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT   DEAD     NEW    NEW
 NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH   VEG.   SEED
        VEG.  REPR.                                   CLASS   PERCENT  TWIG   STALK
                                                                       LNGTH  LNGTH
*******************************************************************************
   1    3.3   9.1     15.0    32.0    28.0    0.0     0.        0.     0.0    0.0
   2    3.1   0.0     11.0    24.0    17.0    0.0     0.        0.     0.0    0.0
   3    3.1   9.1     10.0    37.0    20.0    0.0     0.        0.     0.0    0.0
   4    3.1   0.0     31.0    56.0    38.0    0.0     0.        0.     0.0    0.0 HEAVY SEED PROD. 81
   5    3.2   9.1     18.0    42.0    28.0    0.0     0.        0.     0.0    0.0
   6    3.1   9.2     23.0    47.0    21.0    0.0     0.        0.     0.0    0.0
   7    3.2   9.1     41.0    77.0    65.0    0.0     0.        0.     0.0    0.0 DECADENT
   8    3.3   9.1     11.0    35.0    27.0    0.0     0.        0.     0.0    0.0
   9    3.3   9.1     18.0    41.0    30.0    0.0     0.        0.     0.0    0.0
  10    3.2   9.1      6.0     8.0     4.0    0.0     0.        0.     0.0    0.0 DECADENT
  11    3.1   9.1     50.0   102.0    70.0    0.0     0.        0.     0.0    0.0
  12    3.2   9.1     23.0    50.0    25.0    0.0     0.        0.     0.0    0.0
  13    3.1   0.0     42.0    48.0    38.0    0.0     0.        0.     0.0    0.0
  14    3.2   9.3     26.0    70.0    50.0    0.0     0.        0.     0.0    0.0
  15    3.1   9.1     14.0    21.0    16.0    0.0     0.        0.     0.0    0.0
  16    3.2   9.1     22.0    34.0    23.0    0.0     0.        0.     0.0    0.0
  17    3.8   0.0     10.0    13.0     4.0    0.0     0.        0.     0.0    0.0  DECADENT
  18    3.2   9.1     22.0    28.0    22.0    0.0     0.        0.     0.0    0.0
  19    3.1   9.0     28.0    15.0    31.0    0.0     0.        0.     0.0    0.0
  20    3.3   9.5     10.0    20.0    20.0    0.0     0.        0.     0.0    0.0


  MEAN  3.2   9.1     21.6    40.0    28.9    0.0     0.        0.     0.0    0.0

STD DEV  .2    .1     12.0    23.2    17.0    0.0     0.        0.     0.0    0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
 ARTEMISIA NOVA        STUDY AREA HORSE CK.          DATE 03  JUNE      1981
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
*****************************************************************************
   1    3.5   9.4    24.5   0.0    0.0    0.0    0.       0.     0.0   0.0
   2    3.3   0.0    12.5   0.0    0.0    0.0    0.       0.     0.0   0.0
   3    3.3   9.3    15.0   0.0    0.0    0.0    0.       0.     0.0   0.0
   4    3.4   9.3    34.5   0.0    0.0    0.0    0.       0.     0.0   0.0
   5    3.3   9.3    25.5   0.0    0.0    0.0    0.       0.     0.0   0.0
   6    3.3   9.5    27.5   0.0    0.0    0.0    0.       0.     0.0   0.0
   7    3.4   9.4    44.0   0.0    0.0    0.0    0.       0.     0.0   0.0
   8    3.3   9.4    18.0   0.0    0.0    0.0    0.       0.     0.0   0.0
   9    3.3   9.4    23.0   0.0    0.0    0.0    0.       0.     0.0   0.0
  10    3.4   9.4    14.0   0.0    0.0    0.0    0.       0.     0.0   0.0
  11    3.4   9.5    54.5   0.0    0.0    0.0    0.       0.     0.0   0.0
  12    3.3   9.3    25.5   0.0    0.0    0.0    0.       0.     0.0   0.0
  13    3.3   9.3    43.0   0.0    0.0    0.0    0.       0.     0.0   0.0
  14    3.4   9.5    32.0   0.0    0.0    0.0    0.       0.     0.0   0.0
  15    3.3   9.4    20.0   0.0    0.0    0.0    0.       0.     0.0   0.0
  16    3.3   9.5    29.5   0.0    0.0    0.0    0.       0.     0.0   0.0
  17    3.2   0.0    12.0   0.0    0.0    0.0    0.       0.     0.0   0.0
  18    3.3   9.5    29.5   0.0    0.0    0.0    0.       0.     0.0   0.0
  19    3.3   9.3    30.0   0.0    0.0    0.0    0.       0.     0.0   0.0
  20    3.4   9.5    24.0   0.0    0.0    0.0    0.       0.     0.0   0.0


   MEAN 3.3   9.4    26.9   0.0    0.0    0.0    0.       0.     0.0   0.0

STD DEV  .1    .1    11.0   0.0    0.0    0.0    0.       0.     0.0   0.0


 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
 ARTEMISIA NOVA          STUDY AREA HORSE CK.            DATE 16  JUNE      1981
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PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT   DEAD     NEW    NEW
NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH   VEG.   SEED
       VEG.  REPR.                                   CLASS   PERCENT  TWIG   STALK
                                                                      LNGTH  LNGTH
*********************************************************************************
  1     3.6   9.5     28.0    0.0     0.0     0.0     5.      70.     0.0   16.5
  2     3.5   0.0     12.0    0.0     0.0     0.0     5.      30.     0.0    0.0
  3     3.6   9.5     16.5    0.0     0.0     0.0     4.      30.     0.0   13.5
  4     3.7   9.5     40.0    0.0     0.0     0.0     4.      40.     0.0   11.5
  5     3.6   9.5     30.0    0.0     0.0     0.0     4.      15.     0.0   15.5
  6     3.6   9.5     30.0    0.0     0.0     0.0     4.      15.     0.0   16.0
  7     3.6   9.5     52.0    0.0     0.0     0.0     4.      20.     0.0   18.0
  8     3.5   9.5     24.5    0.0     0.0     0.0     3.       3.     0.0   18.0
  9     3.6   9.5     27.5    0.0     0.0     0.0     4.      30.     0.0   11.0
 10     3.5   9.5     20.0    0.0     0.0     0.0     5.      75.     0.0   15.0
 11     3.7   9.5     65.0    0.0     0.0     0.0     4.      20.     0.0   20.5
 12     3.7   9.5     31.5    0.0     0.0     0.0     4.      25.     0.0   14.5
 13     3.7   9.5     44.0    0.0     0.0     0.0     4.      20.     0.0   10.5
 14     3.7   9.6     35.5    0.0     0.0     0.0     4.       0.     0.0   17.5
 15     3.6   9.5     18.5    0.0     0.0     0.0     5.      40.     0.0   10.5
 16     3.7   9.6     36.0    0.0     0.0     0.0     4.       5.     0.0   17.5
 17     3.5   0.0     12.0    0.0     0.0     0.0     5.      90.     0.0    0.0
 18     3.6   9.5     31.0    0.0     0.0     0.0     4.      20.     0.0   12.0
 19     3.7   9.5     35.0    0.0     0.0     0.0     4.      35.     0.0   10.0
 20     3.6   9.6     29.0    0.0     0.0     0.0     3.       0.     0.0   22.0

   MEAN 3.6   9.5     30.9    0.0     0.0     0.0     4.      32.     0.0   15.0

STD DEV  .1    .0     13.0    0.0     0.0     0.0     1.      24.     0.0    3.6

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA NOVA   STUDY AREA HORSE CK.   DATE 29 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH	
1	4.0	9.6	32.0	0.0	0.0	0.0	0.	0.	0.0	18.0	
2	3.7	0.0	10.0	0.0	0.0	0.0	0.	0.	0.0	0.0	
3	4.0	9.7	22.0	0.0	0.0	0.0	0.	0.	0.0	17.0	
4	4.1	9.6	45.0	0.0	0.0	0.0	0.	0.	0.0	15.0	
5	4.1	9.6	29.0	0.0	0.0	0.0	0.	0.	0.0	18.0	
6	4.2	9.7	34.0	0.0	0.0	0.0	0.	0.	0.0	18.0	
7	4.1	9.6	53.0	0.0	0.0	0.0	0.	0.	0.0	15.0	
8	4.1	9.6	24.5	0.0	0.0	0.0	0.	0.	0.0	19.0	
9	4.1	9.5	31.0	0.0	0.0	0.0	0.	0.	0.0	15.0	
10	4.1	9.6	25.0	0.0	0.0	0.0	0.	0.	0.0	17.0	
11	4.2	9.5	60.0	0.0	0.0	0.0	0.	0.	0.0	23.0	
12	4.2	9.6	37.0	0.0	0.0	0.0	0.	0.	0.0	19.0	
13	4.4	9.7	53.0	0.0	0.0	0.0	0.	0.	0.0	14.0	
14	4.4	9.6	38.0	0.0	0.0	0.0	0.	0.	0.0	20.0	
15	4.3	9.6	28.0	0.0	0.0	0.0	0.	0.	0.0	14.0	
16	4.4	9.6	35.0	0.0	0.0	0.0	0.	0.	0.0	19.0	
17	4.4	9.5	45.0	0.0	0.0	0.0	0.	0.	0.0	22.0	NEW PLANT
18	4.3	9.6	44.0	0.0	0.0	0.0	0.	0.	0.0	18.0	
19	4.5	9.6	35.0	0.0	0.0	0.0	0.	0.	0.0	14.0	
20	4.4	9.6	31.0	0.0	0.0	0.0	0.	0.	0.0	22.0	
MEAN	4.2	9.6	35.6	0.0	0.0	0.0	0.	0.	0.0	17.7	
STD DEV	.2	.1	11.9	0.0	0.0	0.0	0.	0.	0.0	2.8	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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 ARTEMISIA NOVA          STUDY AREA HORSE CK.           DATE 14  JULY      1981
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 PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT   DEAD     NEW   NEW
 NO.   STAGE SCOPE    HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH   VEG.  SEED
        VEG.  REPR.                                   CLASS   PERCENT  TWIG  STALK
                                                                       LNGTH LNGTH
*****************************************************************************************
   1    4.3   9.6     33.0    0.0     0.0     0.0     5.      60.      1.0  21.4 PLANT DECADENT
   2    4.3   9.6     30.4    0.0     0.0     0.0     5.      60.      3.0  19.6 PLANT DECADENT
   3    4.2   9.6     23.2    0.0     0.0     0.0     4.      25.      1.0  17.2
   4    4.3   9.6     42.0    0.0     0.0     0.0     4.       7.      2.2  13.2
   5    4.4   9.6     36.2    0.0     0.0     0.0     5.      15.      1.6  15.1
   6    4.3   9.6     32.5    0.0     0.0     0.0     4.       9.      1.5  19.0
   7    4.3   9.6     50.2    0.0     0.0     0.0     5.      50.      2.0  18.0
   8    4.3   9.6     25.5    0.0     0.0     0.0     4.      12.      1.0  20.5
   9    4.3   9.6     31.4    0.0     0.0     0.0     5.      10.      1.2  14.0
  10    4.1   9.6     22.4    0.0     0.0     0.0     5.      90.      1.0  18.9 PLANT DECADENT
  11    4.3   9.7     65.0    0.0     0.0     0.0     4.       2.      4.7  24.0
  12    4.3   9.7     39.8    0.0     0.0     0.0     4.      15.      2.5  18.2
  13    4.4   9.6     50.0    0.0     0.0     0.0     5.      55.      2.3  16.3 PLANT DECADENT
  14    4.3   9.7     38.2    0.0     0.0     0.0     4.       3.      1.3  22.7
  15    4.3   9.7     27.7    0.0     0.0     0.0     5.      60.     20.0   0.0
  16    4.3   9.6     42.0    0.0     0.0     0.0     5.      25.      1.7  23.1 PLANT DECADENT
  17    4.3   9.6     37.5    0.0     0.0     0.0     4.       5.      1.0  23.5
  18    4.4   9.6     36.0    0.0     0.0     0.0     4.      17.      1.4  15.0
  19    4.3   9.6     36.8    0.0     0.0     0.0     4.      10.      1.6  11.7
  20    4.4   9.6     30.4    0.0     0.0     0.0     3.       5.      1.3  23.6


  MEAN  4.3   9.6     36.5    0.0     0.0     0.0     4.      27.      2.7  18.7

STD DEV  .1    .0     10.2    0.0     0.0     0.0     1.      26.      4.2   3.8

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA NOVA STUDY AREA HORSE CK. DATE 28 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH	
1	4.1	9.6	28.4	0.0	0.0	0.0	5.	50.	.9	0.0	DECADENT
2	4.1	9.0	12.0	0.0	0.0	0.0	3.	25.	.5	0.0	
3	4.2	9.7	22.2	0.0	0.0	0.0	4.	30.	.6	0.0	
4	4.3	9.7	45.0	0.0	0.0	0.0	4.	6.	1.0	0.0	
5	4.4	9.6	32.0	0.0	0.0	0.0	4.	5.	.8	0.0	
6	4.3	9.7	33.0	0.0	0.0	0.0	4.	10.	.7	0.0	
7	4.4	9.6	73.0	0.0	0.0	0.0	4.	3.	1.0	0.0	NEW PLANT
8	4.2	9.6	26.0	0.0	0.0	0.0	3.	4.	.5	0.0	
9	4.0	9.6	29.4	0.0	0.0	0.0	4.	7.	.3	0.0	DEDADENT
10	4.1	9.6	21.0	0.0	0.0	0.0	4.	60.	.2	0.0	
11	4.3	9.7	70.4	0.0	0.0	0.0	4.	3.	.9	0.0	
12	4.3	9.6	39.2	0.0	0.0	0.0	4.	10.	.7	0.0	
13	4.3	9.7	47.0	0.0	0.0	0.0	4.	40.	.8	0.0	DECADENT
14	4.4	9.6	42.7	0.0	0.0	0.0	3.	5.	.7	0.0	
15	4.3	9.6	9.6	0.0	0.0	0.0	4.	75.	.3	0.0	DECADENT
16	4.6	9.6	41.0	0.0	0.0	0.0	4.	12.	.5	0.0	
17	4.6	9.7	42.0	0.0	0.0	0.0	4.	20.	.6	0.0	
18	4.5	9.7	34.4	0.0	0.0	0.0	4.	18.	.8	0.0	
19	4.3	9.6	37.8	0.0	0.0	0.0	4.	10.	.6	0.0	
20	4.2	9.6	32.4	0.0	0.0	0.0	3.	7.	.3	0.0	
MEAN	4.3	9.6	35.9	0.0	0.0	0.0	4.	20.	.6	0.0	
STD DEV	.2	.2	15.9	0.0	0.0	0.0	0.	21.	.2	0.0	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA NOVA STUDY AREA HORSE CK. DATE 11 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.1	9.6	15.5	0.0	0.0	0.0	0.	0.	0.0	7.0
2	4.2	9.5	27.0	0.0	0.0	0.0	0.	0.	0.0	17.5
3	4.3	9.7	22.5	0.0	0.0	0.0	0.	0.	.5	13.0
4	4.3	9.7	38.0	0.0	0.0	0.0	0.	0.	0.0	13.0
5	4.4	9.6	35.0	0.0	0.0	0.0	0.	0.	.5	19.5
6	4.3	9.7	33.5	0.0	0.0	0.0	0.	0.	0.0	16.7
7	4.5	9.7	55.0	0.0	0.0	0.0	0.	0.	.5	17.0
8	4.2	9.6	26.0	0.0	0.0	0.0	0.	0.	0.0	20.0
9	4.3	9.7	36.7	0.0	0.0	0.0	0.	0.	.3	13.5
10	4.2	9.6	23.0	0.0	0.0	0.0	0.	0.	0.0	18.0
11	4.3	9.7	23.5	0.0	0.0	0.0	0.	0.	.5	23.0
12	4.3	9.6	31.0	0.0	0.0	0.0	0.	0.	.5	19.0
13	4.3	9.7	55.0	0.0	0.0	0.0	0.	0.	.5	15.0
14	4.6	9.6	42.5	0.0	0.0	0.0	0.	0.	.8	26.0
15	4.3	9.6	28.5	0.0	0.0	0.0	0.	0.	.5	14.5
16	4.6	9.6	39.0	0.0	0.0	0.0	0.	0.	.5	24.0
17	4.6	9.7	39.0	0.0	0.0	0.0	0.	0.	.4	23.0
18	4.5	9.7	36.0	0.0	0.0	0.0	0.	0.	.5	16.0
19	4.3	9.7	37.0	0.0	0.0	0.0	0.	0.	.4	11.5
20	4.2	9.7	32.0	0.0	0.0	0.0	0.	0.	0.0	24.5
MEAN	4.3	9.6	33.8	0.0	0.0	0.0	0.	0.	.5	17.6
STD DEV	.1	.1	10.0	0.0	0.0	0.0	0.	0.	.1	4.9

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA NOVA STUDY AREA HORSE CK. DATE 25 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.5	9.8	32.0	0.0	0.0	0.0	0.	0.	0.0	20.0
2	4.3	9.5	13.0	0.0	0.0	0.0	0.	0.	0.0	2.0
3	4.5	9.8	24.0	0.0	0.0	0.0	0.	0.	0.0	18.5
4	4.6	9.8	42.0	0.0	0.0	0.0	0.	0.	0.0	18.9
5	4.6	9.8	35.8	0.0	0.0	0.0	0.	0.	0.0	17.2
6	4.6	9.8	36.3	0.0	0.0	0.0	0.	0.	0.0	19.0
7	4.6	9.8	52.0	0.0	0.0	0.0	0.	0.	0.0	19.4
8	4.5	9.8	26.8	0.0	0.0	0.0	0.	0.	0.0	20.5
9	4.5	9.8	29.0	0.0	0.0	0.0	0.	0.	0.0	13.9
10	4.4	9.7	10.0	0.0	0.0	0.0	0.	0.	0.0	21.0
11	4.6	9.8	75.0	0.0	0.0	0.0	0.	0.	0.0	21.0
12	4.5	9.8	33.7	0.0	0.0	0.0	0.	0.	0.0	19.5
13	4.5	9.7	52.0	0.0	0.0	0.0	0.	0.	0.0	17.0
14	4.5	9.8	43.5	0.0	0.0	0.0	0.	0.	0.0	22.0
15	4.3	9.7	18.0	0.0	0.0	0.0	0.	0.	0.0	14.5
16	4.5	9.8	35.0	0.0	0.0	0.0	0.	0.	0.0	21.0
17	4.6	9.7	40.0	0.0	0.0	0.0	0.	0.	0.0	20.0
18	4.5	9.8	34.3	0.0	0.0	0.0	0.	0.	0.0	15.5
19	4.5	9.7	37.0	0.0	0.0	0.0	0.	0.	0.0	11.0
20	4.5	9.7	34.0	0.0	0.0	0.0	0.	0.	0.0	27.5
MEAN	4.5	9.8	35.2	0.0	0.0	0.0	0.	0.	0.0	18.0
STD DEV	.1	.1	14.4	0.0	0.0	0.0	0.	0.	0.0	5.1

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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 ARTEMISIA NOVA       STUDY AREA HORSE CK.          DATE 12  SEPT     1981
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  PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT    DEAD    NEW   NEW
  NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH    VEG.  SEED
         VEG.  REPR.                               CLASS  PERCENT   TWIG  STALK
                                                                    LNGTH LNGTH
***************************************************************************
    1    4.9   0.0     24.3    0.0    0.0    0.0    0.       0.      .2   0.0
    2    5.1  11.7     53.9    0.0    0.0    0.0    0.       0.     8.0  25.5
    3    5.0  11.3     54.0    0.0    0.0    0.0    0.       0.     2.5  16.4
    4    4.9  10.8     76.0    0.0    0.0    0.0    0.       0.     5.4  19.5
    5    5.0  11.0     14.8    0.0    0.0    0.0    0.       0.      .6  10.2
    6    5.0  10.5     17.4    0.0    0.0    0.0    0.       0.     1.2   6.0
    7    5.1  10.6     63.0    0.0    0.0    0.0    0.       0.     2.6  13.5
    8    5.2  11.0     50.0    0.0    0.0    0.0    0.       0.     3.2  14.5
    9    5.0   0.0     21.0    0.0    0.0    0.0    0.       0.     2.8   0.0
   10    5.1  10.8     37.2    0.0    0.0    0.0    0.       0.     6.5  20.0
   11    5.1  11.2     30.0    0.0    0.0    0.0    0.       0.     3.5  16.0
   12    5.0  10.9     24.0    0.0    0.0    0.0    0.       0.     4.0   9.8
   13    5.2  10.5     45.2    0.0    0.0    0.0    0.       0.     3.0  13.5
   14    5.1   0.0     29.5    0.0    0.0    0.0    0.       0.     1.4   0.0
   15    5.0  10.5     61.0    0.0    0.0    0.0    0.       0.     3.0  13.0
   16    5.1  10.8     27.4    0.0    0.0    0.0    0.       0.     3.6  17.2
   17    5.0  10.4     45.8    0.0    0.0    0.0    0.       0.     1.5   8.4
   18    5.1  10.5     31.4    0.0    0.0    0.0    0.       0.     1.0  11.0
   19    5.1   0.0     18.6    0.0    0.0    0.0    0.       0.     2.8   0.0
   20    5.1   0.0     15.0    0.0    0.0    0.0    0.       0.      .5   0.0


   MEAN  5.1  10.8     37.0    0.0    0.0    0.0    0.       0.     2.9  14.3

 STD DEV  .1    .4     18.0    0.0    0.0    0.0    0.       0.     2.0   5.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA NOVA        STUDY AREA OWL DRAW          DATE  1  MAY     1981
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PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW    NEW
NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.   SEED
       VEG.  REPR.                              CLASS  PERCENT  TWIG   STALK
                                                                LNGTH  LNGTH
******************************************************************************
  1     2.9   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
  2     3.3   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
  3     3.2   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
  4     3.0   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
  5     3.1   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
  6     3.1   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
  7     3.1   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
  8     2.5   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
  9     2.5   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 10     2.8   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 11     2.9   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 12     3.0   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 13     2.7   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 14     3.0   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 15     3.1   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 16     3.2   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 17     2.8   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 18     2.7   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 19     2.7   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 20     2.9   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0


   MEAN 2.9   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0

STD DEV  .2   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0    0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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  ARTEMISIA NOVA           STUDY AREA OWL DRAW               DATE 25  MAY        1981
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 PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW   NEW
 NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE      BRANCH   VEG.  SEED
        VEG.  REPR.                                   CLASS    PERCENT  TWIG  STALK
                                                                        LNGTH LNGTH
*****************************************************************************************
   1     3.1   9.0      9.0    17.0    16.0    0.0     0.       0.      0.0   0.0
   2     3.4   9.1     11.0    17.0    15.0    0.0     0.       0.      0.0   0.0
   3     3.3   9.1     19.0    29.0    21.0    0.0     0.       0.      0.0   0.0
   4     3.1   9.0      8.0    26.0    17.0    0.0     0.       0.      0.0   0.0
   5     3.2   9.1      6.0    19.0    14.0    0.0     0.       0.      0.0   0.0 DECADENT
   6     3.2   9.1      8.0    12.0    12.0    0.0     0.       0.      0.0   0.0
   7     3.1   9.1     15.0    28.0    25.0    0.0     0.       0.      0.0   0.0
   8     3.0   9.0     11.0    21.0    20.0    0.0     0.       0.      0.0   0.0
   9     3.0   9.0      9.0    18.0    15.0    0.0     0.       0.      0.0   0.0
  10     2.9   9.0      9.0    14.0     8.0    0.0     0.       0.      0.0   0.0 DECADENT
  11     3.0   9.0      9.0    19.0    12.0    0.0     0.       0.      0.0   0.0
  12     3.1   9.0      8.0    19.0    15.0    0.0     0.       0.      0.0   0.0
  13     2.9   9.0     10.0    31.0    24.0    0.0     0.       0.      0.0   0.0 DECADENT
  14     3.1   9.0      6.0    15.0    11.0    0.0     0.       0.      0.0   0.0
  15     3.1   9.2     11.0    41.0    41.0    0.0     0.       0.      0.0   0.0
  16     3.2   9.0      7.0    12.0    15.0    0.0     0.       0.      0.0   0.0 DECADENT
  17     3.0   9.0     12.0    22.0    31.0    0.0     0.       0.      0.0   0.0
  18     3.1   9.0     15.0    38.0    40.0    0.0     0.       0.      0.0   0.0
  19     3.0   9.0     10.0    15.0    16.0    0.0     0.       0.      0.0   0.0
  20     3.1   9.0      4.0    12.0     7.0    0.0     0.       0.      0.0   0.0


  MEAN   3.1   9.0      9.9    21.3    18.8    0.0     0.       0.      0.0   0.0

 STD DEV  .1    .1      3.5     8.4     9.4    0.0     0.       0.      0.0   0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA NOVA   STUDY AREA OWL DRAW   DATE 08 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.3	9.2	9.5	0.0	0.0	0.0	4.	0.	0.0	0.0
2	3.5	9.2	11.3	0.0	0.0	0.0	5.	50.	0.0	0.0
3	3.4	9.2	11.5	0.0	0.0	0.0	4.	20.	0.0	0.0
4	3.3	9.3	10.0	0.0	0.0	0.0	4.	20.	0.0	0.0
5	3.3	9.4	13.0	0.0	0.0	0.0	4.	10.	0.0	0.0
6	3.4	9.3	16.5	0.0	0.0	0.0	5.	10.	0.0	0.0
7	3.3	9.4	19.0	0.0	0.0	0.0	4.	15.	0.0	0.0
8	3.5	9.4	11.5	0.0	0.0	0.0	4.	15.	0.0	0.0
9	3.5	9.4	17.0	0.0	0.0	0.0	4.	20.	0.0	0.0
10	3.3	9.2	10.0	0.0	0.0	0.0	5.	45.	0.0	0.0
11	3.4	9.1	5.5	0.0	0.0	0.0	5.	25.	0.0	0.0
12	3.2	9.1	6.5	0.0	0.0	0.0	5.	30.	0.0	0.0
13	3.2	9.1	13.5	0.0	0.0	0.0	4.	20.	0.0	0.0
14	3.3	9.1	9.0	0.0	0.0	0.0	5.	50.	0.0	0.0
15	3.4	9.4	18.5	0.0	0.0	0.0	4.	20.	0.0	0.0
16	3.4	9.4	8.5	0.0	0.0	0.0	5.	5.	0.0	0.0
17	3.3	9.2	12.5	0.0	0.0	0.0	4.	5.	0.0	0.0
18	3.2	9.2	14.5	0.0	0.0	0.0	4.	60.	0.0	0.0
19	3.3	9.4	14.0	0.0	0.0	0.0	4.	20.	0.0	0.0
20	3.2	9.1	5.0	0.0	0.0	0.0	3.	2.	0.0	0.0
MEAN	3.3	9.3	11.8	0.0	0.0	0.0	4.	23.	0.0	0.0
STD DEV	.1	.1	4.0	0.0	0.0	0.0	1.	17.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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 ARTEMISIA NOVA           STUDY AREA OWL DRAW                DATE 15  JUNE      1981
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PLANT PHENOLOGICAL   PLANT  PLANT   PLANT  PLANT   PLANT    DEAD     NEW    NEW
NO.   STAGE SCORE    HGHT   LNGTH   WIDTH  DIAM    AGE     BRANCH    VEG.   SEED
       VEG.  REPR.                                 CLASS   PERCENT   TWIG   STALK
                                                                     LNGTH  LNGTH
***************************************************************************************
  1     3.5   9.3    11.0    0.0     0.0    0.0     0.        0.      0.0    0.0
  2     3.7   9.3    11.5    0.0     0.0    0.0     0.        0.      0.0    0.0
  3     3.7   9.4    12.0    0.0     0.0    0.0     0.        0.      0.0    8.0
  4     3.7   9.4    11.5    0.0     0.0    0.0     0.        0.      0.0    6.5
  5     3.5   9.4    10.0    0.0     0.0    0.0     0.        0.      0.0    6.5
  6     3.6   9.4    12.5    0.0     0.0    0.0     0.        0.      0.0    7.0
  7     3.6   9.4    20.5    0.0     0.0    0.0     0.        0.      0.0    6.0
  8     3.7   9.4    11.5    0.0     0.0    0.0     0.        0.      0.0    6.5
  9     3.7   9.4    20.0    0.0     0.0    0.0     0.        0.      0.0    7.0
 10     3.5   9.4    10.5    0.0     0.0    0.0     0.        0.      0.0    2.4
 11     3.6   9.1     5.0    0.0     0.0    0.0     0.        0.      0.0    0.0
 12     3.5   9.1     5.8    0.0     0.0    0.0     0.        0.      0.0    0.0
 13     3.7   9.4    13.5    0.0     0.0    0.0     0.        0.      0.0    4.5
 14     3.7   9.4     7.0    0.0     0.0    0.0     0.        0.      0.0    4.5
 15     3.8   9.6    20.5    0.0     0.0    0.0     0.        0.      0.0   10.5
 16     3.8   9.6    11.0    0.0     0.0    0.0     0.        0.      0.0    6.5
 17     3.7   9.5    10.5    0.0     0.0    0.0     0.        0.      0.0    3.5
 18     3.5   9.4    15.0    0.0     0.0    0.0     0.        0.      0.0    4.5
 19     3.6   9.4    16.5    0.0     0.0    0.0     0.        0.      0.0    9.0
 20     3.6   9.2     5.5    0.0     0.0    0.0     0.        0.      0.0    0.0

   MEAN 3.6   9.4    12.1    0.0     0.0    0.0     0.        0.      0.0    6.2

STD DEV  .1    .1     4.6    0.0     0.0    0.0     0.        0.      0.0    2.1

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
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ARTEMISIA NOVA   STUDY AREA EWL DRAW   DATE 28 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.1	0.0	11.0	0.0	0.0	0.0	0.	0.	0.0	0.0
2	4.1	0.0	13.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	3.8	0.0	15.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	4.2	9.6	9.0	0.0	0.0	0.0	0.	0.	0.0	10.0
5	4.0	9.5	9.0	0.0	0.0	0.0	0.	0.	0.0	7.0
6	4.1	9.6	11.5	0.0	0.0	0.0	0.	0.	0.0	9.0
7	4.0	9.6	22.0	0.0	0.0	0.0	0.	0.	0.0	13.0
8	4.1	9.6	15.0	0.0	0.0	0.0	0.	0.	0.0	7.0
9	4.2	9.7	15.0	0.0	0.0	0.0	0.	0.	0.0	11.5
10	3.8	9.5	12.0	0.0	0.0	0.0	0.	0.	0.0	5.0
11	3.8	0.0	8.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	3.8	0.0	8.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	3.9	9.6	13.0	0.0	0.0	0.0	0.	0.	0.0	6.0
14	3.9	9.5	7.0	0.0	0.0	0.0	0.	0.	0.0	5.0
15	4.5	9.8	27.5	0.0	0.0	0.0	0.	0.	0.0	18.0
16	4.2	9.7	14.5	0.0	0.0	0.0	0.	0.	0.0	9.0
17	4.1	9.7	19.0	0.0	0.0	0.0	0.	0.	0.0	8.0
18	4.3	9.6	23.0	0.0	0.0	0.0	0.	0.	0.0	6.0
19	4.1	9.6	16.0	0.0	0.0	0.0	0.	0.	0.0	8.0
20	4.1	0.0	5.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	4.1	9.6	13.7	0.0	0.0	0.0	0.	0.	0.0	8.8
STD DEV	.2	.1	5.8	0.0	0.0	0.0	0.	0.	0.0	3.5

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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 ARTEMISIA NOVA            STUDY AREA OWL DRAW              DATE 13  JULY     1981
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PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD     NEW    NEW
NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH    VEG.   SEED
      VEG.  REPR.                               CLASS  PERCENT   TWIG   STALK
                                                                 LNGTH  LNGTH
******************************************************************************
  1    4.0   9.5    11.0    0.0    0.0    0.0    2.      5.      0.0    0.0
  2    4.0   9.5    10.8    0.0    0.0    0.0    3.     15.      0.0    0.0
  3    4.1   9.5    10.7    0.0    0.0    0.0    3.     25.      0.0    0.0
  4    4.1   9.5     9.9    0.0    0.0    0.0    3.     10.      0.0    9.0
  5    4.3   9.6     9.2    0.0    0.0    0.0    2.      7.      0.0    8.3
  6    4.3   9.6     7.6    0.0    0.0    0.0    4.     45.      0.0    7.9
  7    4.2   9.6    15.0    0.0    0.0    0.0    3.      3.      0.0   13.6
  8    4.1   9.6     9.6    0.0    0.0    0.0    3.     12.      0.0    9.7
  9    4.1   9.6     9.1    0.0    0.0    0.0    2.      5.      0.0    5.5
 10    4.0   9.6    11.3    0.0    0.0    0.0    3.     30.      0.0    5.5
 11    4.0   9.5     7.5    0.0    0.0    0.0    3.     10.      0.0    0.0
 12    4.0   9.6     9.4    0.0    0.0    0.0    3.     30.      0.0    0.0
 13    4.1   9.6    15.8    0.0    0.0    0.0    3.      5.      0.0    0.0
 14    4.1   9.6     8.0    0.0    0.0    0.0    4.     60.      0.0    0.0
 15    4.2   9.6    15.7    0.0    0.0    0.0    3.      2.      0.0   17.7
 16    4.1   9.6     7.0    0.0    0.0    0.0    3.     25.      0.0    8.7
 17    4.0   9.6    11.0    0.0    0.0    0.0    3.      2.      0.0   12.0
 18    4.0   9.6    16.7    0.0    0.0    0.0    3.     15.      0.0    0.0
 19    4.1   9.6    11.3    0.0    0.0    0.0    3.      5.      0.0   14.3
 20    4.0   9.6    10.0    0.0    0.0    0.0    0.      0.      0.0    0.0


 MEAN  4.1   9.6    10.8    0.0    0.0    0.0    3.     16.      0.0   10.2

STD DEV .1    .0     2.9    0.0    0.0    0.0    1.     16.      0.0    3.8

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
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ARTEMISIA NOVA STUDY AREA OWL DRAW DATE 27 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.2	0.0	7.0	0.0	0.0	0.0	0.	0.	0.0	0.0
2	4.3	0.0	8.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	4.3	0.0	10.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	4.3	9.6	10.0	0.0	0.0	0.0	0.	0.	0.0	10.5
5	4.4	9.4	12.0	0.0	0.0	0.0	0.	0.	0.0	7.5
6	4.2	9.5	12.5	0.0	0.0	0.0	0.	0.	0.0	9.5
7	4.3	9.6	21.0	0.0	0.0	0.0	0.	0.	0.0	10.0
8	4.4	9.6	11.0	0.0	0.0	0.0	0.	0.	0.0	5.5
9	4.3	9.6	24.0	0.0	0.0	0.0	0.	0.	0.0	9.0
10	4.0	0.0	13.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	4.3	0.0	8.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	4.1	0.0	9.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	4.0	9.6	10.0	0.0	0.0	0.0	0.	0.	0.0	6.0
14	4.3	9.5	8.5	0.0	0.0	0.0	0.	0.	0.0	3.5
15	4.4	9.6	30.0	0.0	0.0	0.0	0.	0.	0.0	18.0
16	4.2	9.6	12.5	0.0	0.0	0.0	0.	0.	0.0	9.5
17	4.4	9.6	12.0	0.0	0.0	0.0	0.	0.	0.0	5.0
18	4.3	0.0	15.0	0.0	0.0	0.0	0.	0.	0.0	0.0
19	4.2	9.7	19.0	0.0	0.0	0.0	0.	0.	0.0	11.0
20	4.2	0.0	6.5	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	4.3	9.6	13.0	0.0	0.0	0.0	0.	0.	0.0	8.8
STD DEV	.1	.1	6.1	0.0	0.0	0.0	0.	0.	0.0	3.8

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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  ARTEMISIA NOVA          STUDY AREA OWL DRAW              DATE 10  AUGUST   1981
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 PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD      NEW    NEW
 NO.    STAGE SCORE   HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH     VEG.   SEED
         VEG.  REPR.                                  CLASS   PERCENT    TWIG   STALK
                                                                         LNGTH  LNGTH
*****************************************************************************************
   1      4.3   0.0   10.0     0.0     0.0     0.0    0.        0.       0.0    0.0
   2      4.4   0.0   10.0     0.0     0.0     0.0    0.        0.       0.0    0.0
   3      4.3   0.0   10.0     0.0     0.0     0.0    0.        0.       0.0    0.0
   4      4.3   9.6   16.0     0.0     0.0     0.0    0.        0.       0.0   11.5
   5      4.3   9.5   14.5     0.0     0.0     0.0    0.        0.       0.0    9.5
   6      4.2   9.5   13.0     0.0     0.0     0.0    0.        0.       0.0    9.5
   7      4.3   9.6   26.0     0.0     0.0     0.0    0.        0.       0.0   13.0
   8      4.4   9.6   16.5     0.0     0.0     0.0    0.        0.       0.0    6.5
   9      4.4   9.6   26.0     0.0     0.0     0.0    0.        0.       0.0   14.5
  10      4.2   9.5   18.0     0.0     0.0     0.0    0.        0.       0.0    8.5 NEW PLANT
  11      4.3   0.0    7.0     0.0     0.0     0.0    0.        0.       0.0    0.0
  12      4.2   0.0    9.0     0.0     0.0     0.0    0.        0.       0.0    0.0
  13      4.1   0.0   11.0     0.0     0.0     0.0    0.        0.       0.0    0.0
  14      4.3   9.5   11.0     0.0     0.0     0.0    0.        0.       0.0    3.0
  15      4.5   9.6   32.0     0.0     0.0     0.0    0.        0.       0.0   20.0
  16      4.2   9.6   13.0     0.0     0.0     0.0    0.        0.       0.0    9.0
  17      4.4   9.6   11.0     0.0     0.0     0.0    0.        0.       0.0    7.5
  18      4.4   9.5   15.0     0.0     0.0     0.0    0.        0.       0.0    8.0
  19      4.3   9.7   20.0     0.0     0.0     0.0    0.        0.       0.0   12.0
  20      4.2   0.0   10.0     0.0     0.0     0.0    0.        0.       0.0    0.0


    MEAN  4.3   9.6   15.0     0.0     0.0     0.0    0.        0.       0.0   10.2

 STD DEV   .1    .1    6.6     0.0     0.0     0.0    0.        0.       0.0    4.2

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA NOVA   STUDY AREA OWL DRAW   DATE 24 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.5	0.0	12.0	0.0	0.0	0.0	0.	0.	0.0	0.0
2	4.4	0.0	11.4	0.0	0.0	0.0	0.	0.	0.0	0.0
3	4.3	0.0	13.4	0.0	0.0	0.0	0.	0.	0.0	0.0
4	4.5	9.6	17.8	0.0	0.0	0.0	0.	0.	0.0	10.7
5	4.4	9.5	16.8	0.0	0.0	0.0	0.	0.	0.0	8.5
6	4.3	9.6	12.5	0.0	0.0	0.0	0.	0.	0.0	7.7
7	4.5	9.8	26.3	0.0	0.0	0.0	0.	0.	0.0	12.5
8	4.4	9.5	16.7	0.0	0.0	0.0	0.	0.	0.0	7.4
9	4.5	9.7	15.4	0.0	0.0	0.0	0.	0.	0.0	8.6
10	4.5	9.6	25.0	0.0	0.0	0.0	0.	0.	0.0	4.5
11	4.5	0.0	9.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	4.3	0.0	7.9	0.0	0.0	0.0	0.	0.	0.0	0.0
13	4.5	9.5	15.8	0.0	0.0	0.0	0.	0.	0.0	6.4
14	4.6	9.5	8.9	0.0	0.0	0.0	0.	0.	0.0	5.1
15	4.6	9.8	3.0	0.0	0.0	0.0	0.	0.	0.0	17.0
16	4.6	9.5	15.6	0.0	0.0	0.0	0.	0.	0.0	9.6
17	4.6	9.6	20.4	0.0	0.0	0.0	0.	0.	0.0	13.0
18	4.6	9.6	26.6	0.0	0.0	0.0	0.	0.	0.0	9.0
19	4.6	9.7	24.3	0.0	0.0	0.0	0.	0.	0.0	12.8
20	4.5	0.0	6.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	4.5	9.6	15.2	0.0	0.0	0.0	0.	0.	0.0	9.5
STD DEV	.1	.1	6.8	0.0	0.0	0.0	0.	0.	0.0	3.4

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA NOVA         STUDY AREA OWL DRAW              DATE 11  SEPT      1981
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PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH  VEG.  SEED
       VEG.  REPR.                               CLASS   PERCENT TWIG  STALK
                                                                 LNGTH LNGTH
****************************************************************************************
   1     4.8   0.0    10.6    0.0    0.0    0.0    0.      0.     .3   0.0
   2     4.7   0.0    10.6    0.0    0.0    0.0    0.      0.     .4   0.0
   3     4.9   0.0    13.7    0.0    0.0    0.0    0.      0.     .4   0.0
   4     4.8  12.8     9.6    0.0    0.0    0.0    0.      0.     .2  11.6
   5     4.8  13.0    15.6    0.0    0.0    0.0    0.      0.     .3   9.0
   6     4.8  13.0    12.5    0.0    0.0    0.0    0.      0.     .3   9.5
   7     4.7  13.0    25.0    0.0    0.0    0.0    0.      0.     .4  13.2
   8     4.9  12.9    14.2    0.0    0.0    0.0    0.      0.     .4   6.0
   9     4.9  13.3    26.0    0.0    0.0    0.0    0.      0.     .3  15.2
  10     4.8  13.0    18.8    0.0    0.0    0.0    0.      0.     .4  10.8
  11     4.8   0.0     5.5    0.0    0.0    0.0    0.      0.     .2   0.0
  12     4.7   0.0     7.0    0.0    0.0    0.0    0.      0.     .2   0.0
  13     4.9   0.0    12.5    0.0    0.0    0.0    0.      0.     .3   0.0
  14     4.9  13.2    10.0    0.0    0.0    0.0    0.      0.     .2   3.0
  15     5.0  13.5    30.0    0.0    0.0    0.0    0.      0.     .4  20.5
  16     4.9  13.0    11.5    0.0    0.0    0.0    0.      0.     .2   7.6
  17     4.8  13.2    16.8    0.0    0.0    0.0    0.      0.     .3  12.2
  18     4.8   0.0    16.6    0.0    0.0    0.0    0.      0.     .3   0.0
  19     4.7  13.0    16.8    0.0    0.0    0.0    0.      0.     .2  10.8
  20     4.8   0.0     5.5    0.0    0.0    0.0    0.      0.     .2   0.0


  MEAN   4.8  13.1    14.4    0.0    0.0    0.0    0.      0.     .3  10.8

 STD DEV  .1    .2     6.6    0.0    0.0    0.0    0.      0.     .1   4.5

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA NOVA STUDY AREA SWEETWATER DATE 25 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH	
1	3.3	9.0	11.0	40.0	36.0	0.0	0.	0.	0.0	0.0	
2	3.2	9.1	15.0	80.0	35.0	0.0	0.	0.	0.0	0.0	
3	3.4	9.0	12.0	34.0	22.0	0.0	0.	0.	0.0	0.0	
4	3.3	9.0	14.0	40.0	37.0	0.0	0.	0.	0.0	0.0	
5	3.3	9.0	6.0	13.0	5.0	0.0	0.	0.	0.0	0.0	
6	3.3	9.1	9.0	34.0	18.0	0.0	0.	0.	0.0	0.0	
7	3.2	9.0	6.0	18.0	5.0	0.0	0.	90.	0.0	0.0	2 SEGMENTS
8	3.3	9.0	8.0	20.0	12.0	0.0	0.	0.	0.0	0.0	
9	3.3	9.0	14.0	63.0	30.0	0.0	0.	0.	0.0	0.0	NEW PLANT
10	3.4	9.0	9.0	24.0	18.0	0.0	0.	0.	0.0	0.0	
11	3.3	9.0	10.0	40.0	30.0	0.0	0.	0.	0.0	0.0	
12	3.3	9.0	10.0	27.0	12.0	0.0	0.	0.	0.0	0.0	
13	3.3	9.0	15.0	69.0	50.0	0.0	0.	0.	0.0	0.0	
14	3.3	9.0	7.0	16.0	13.0	0.0	0.	0.	0.0	0.0	
15	3.3	9.1	4.0	18.0	5.0	0.0	0.	90.	0.0	0.0	2 SEGMENTS
16	3.3	9.0	3.0	12.0	8.0	0.0	0.	0.	0.0	0.0	DECADENT
17	3.2	9.0	8.0	3.0	3.0	0.0	0.	95.	0.0	0.0	2 SEGMENTS
18	3.2	9.0	8.0	26.0	20.0	0.0	0.	60.	0.0	0.0	DECADENT
19	3.3	9.0	8.0	40.0	15.0	0.0	0.	0.	0.0	0.0	
20	3.2	9.0	10.0	30.0	20.0	0.0	0.	0.	0.0	0.0	
MEAN	3.3	9.0	9.4	32.4	19.7	0.0	0.	84.	0.0	0.0	
STD DEV	.1	.0	3.4	19.8	13.0	0.0	0.	16.	0.0	0.0	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA NOVA   STUDY AREA SWEETWATER   DATE 09 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.5	9.4	11.5	0.0	0.0	0.0	4.	20.	0.0	2.0
2	3.5	9.5	17.0	0.0	0.0	0.0	4.	45.	0.0	5.5
3	3.5	9.3	12.5	0.0	0.0	0.0	4.	15.	0.0	4.5
4	3.5	9.5	19.0	0.0	0.0	0.0	4.	10.	0.0	4.5
5	3.4	9.2	7.0	0.0	0.0	0.0	2.	5.	0.0	1.2
6	3.4	9.5	14.0	0.0	0.0	0.0	4.	5.	0.0	4.5
7	3.4	9.4	8.5	0.0	0.0	0.0	4.	45.	0.0	3.0
8	3.4	9.2	10.0	0.0	0.0	0.0	3.	20.	0.0	1.1
9	3.5	9.5	22.0	0.0	0.0	0.0	4.	30.	0.0	8.3
10	3.5	9.3	4.8	0.0	0.0	0.0	4.	15.	0.0	1.5
11	3.5	9.5	15.0	0.0	0.0	0.0	4.	2.	0.0	5.0
12	3.6	9.5	13.5	0.0	0.0	0.0	4.	20.	0.0	3.0
13	3.5	9.5	16.0	0.0	0.0	0.0	4.	10.	0.0	6.5
14	3.5	9.4	9.0	0.0	0.0	0.0	2.	1.	0.0	5.0
15	3.6	9.5	10.0	0.0	0.0	0.0	4.	20.	0.0	6.5
16	3.4	9.2	4.0	0.0	0.0	0.0	5.	60.	0.0	.5
17	3.3	9.3	9.5	0.0	0.0	0.0	4.	80.	0.0	1.0
18	3.5	9.5	11.5	0.0	0.0	0.0	4.	65.	0.0	3.5
19	3.4	9.3	7.0	0.0	0.0	0.0	4.	55.	0.0	1.3
20	3.5	9.5	23.5	0.0	0.0	0.0	4.	20.	0.0	9.2
MEAN	3.5	9.4	12.3	0.0	0.0	0.0	4.	27.	0.0	3.9
STD DEV	.1	.1	5.3	0.0	0.0	0.0	1.	23.	0.0	2.5

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA NOVA   STUDY AREA SWEETWATER   DATE 17 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.4	9.5	14.0	0.0	0.0	0.0	0.	0.	0.0	3.5
2	3.5	9.5	19.2	0.0	0.0	0.0	0.	0.	0.0	8.5
3	3.5	9.4	14.1	0.0	0.0	0.0	0.	0.	0.0	3.5
4	3.5	9.5	20.5	0.0	0.0	0.0	0.	0.	0.0	6.3
5	3.4	9.3	7.0	0.0	0.0	0.0	0.	0.	0.0	1.5
6	3.5	9.5	18.0	0.0	0.0	0.0	0.	0.	0.0	6.5
7	3.5	9.4	12.0	0.0	0.0	0.0	0.	0.	0.0	3.6
8	3.5	9.3	11.0	0.0	0.0	0.0	0.	0.	0.0	2.5
9	3.5	9.5	26.5	0.0	0.0	0.0	0.	0.	0.0	10.4
10	3.5	9.3	13.5	0.0	0.0	0.0	0.	0.	0.0	3.6
11	3.5	9.5	23.5	0.0	0.0	0.0	0.	0.	0.0	9.8
12	3.6	9.5	13.5	0.0	0.0	0.0	0.	0.	0.0	5.1
13	3.6	9.4	16.5	0.0	0.0	0.0	0.	0.	0.0	3.6
14	3.5	9.4	11.5	0.0	0.0	0.0	0.	0.	0.0	6.4
15	3.6	9.5	11.4	0.0	0.0	0.0	0.	0.	0.0	7.9
16	3.5	9.3	6.5	0.0	0.0	0.0	0.	0.	0.0	1.0
17	3.4	9.3	11.0	0.0	0.0	0.0	0.	0.	0.0	2.0
18	3.5	9.5	13.2	0.0	0.0	0.0	0.	0.	0.0	4.6
19	3.5	9.4	10.5	0.0	0.0	0.0	0.	0.	0.0	3.4
20	3.5	9.4	13.5	0.0	0.0	0.0	0.	0.	0.0	3.8
MEAN	3.5	9.4	14.3	0.0	0.0	0.0	0.	0.	0.0	4.9
STD DEV	.1	.1	5.1	0.0	0.0	0.0	0.	0.	0.0	2.7

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA NOVA   STUDY AREA SWEETWATER   DATE 01 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH	
1	4.4	9.6	18.0	0.0	0.0	0.0	0.	0.	0.0	7.0	
2	4.2	9.6	27.5	0.0	0.0	0.0	0.	0.	0.0	15.0	
3	4.2	9.6	21.0	0.0	0.0	0.0	0.	0.	0.0	7.0	
4	4.2	9.6	23.0	0.0	0.0	0.0	0.	0.	0.0	7.0	
5	4.1	0.0	7.0	0.0	0.0	0.0	0.	0.	0.0	0.0	
6	4.2	9.6	17.0	0.0	0.0	0.0	0.	0.	0.0	7.0	
7	4.0	0.0	11.0	0.0	0.0	0.0	0.	0.	0.0	0.0	DECADENT
8	4.2	0.0	11.0	0.0	0.0	0.0	0.	0.	0.0	0.0	
9	4.3	9.6	22.0	0.0	0.0	0.0	0.	0.	0.0	13.0	
10	4.1	9.5	13.0	0.0	0.0	0.0	0.	0.	0.0	3.0	
11	4.2	9.6	29.0	0.0	0.0	0.0	0.	0.	0.0	10.0	
12	4.2	9.6	18.0	0.0	0.0	0.0	0.	0.	0.0	9.0	
13	4.3	9.6	19.0	0.0	0.0	0.0	0.	0.	0.0	13.0	
14	4.2	9.6	15.0	0.0	0.0	0.0	0.	0.	0.0	7.0	
15	4.1	9.6	13.0	0.0	0.0	0.0	0.	0.	0.0	9.0	DECADENT
16	4.2	0.0	8.0	0.0	0.0	0.0	0.	0.	0.0	0.0	
17	4.1	9.5	14.0	0.0	0.0	0.0	0.	0.	0.0	6.0	DECADENT
18	4.1	9.6	17.0	0.0	0.0	0.0	0.	0.	0.0	8.0	
19	4.1	9.5	12.0	0.0	0.0	0.0	0.	0.	0.0	7.1	DECADENT
20	4.2	9.6	17.5	0.0	0.0	0.0	0.	0.	0.0	7.0	
MEAN	4.2	9.6	16.7	0.0	0.0	0.0	0.	0.	0.0	8.4	
STD DEV	.1	.0	5.9	0.0	0.0	0.0	0.	0.	0.0	3.0	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA NOVA   STUDY AREA SWEETWATER   DATE 15 JULY 1981

PLANT NO.	PHENCLOGICAL STAGE SCORE VEG.	PHENCLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.0	9.6	13.0	0.0	0.0	0.0	0.	0.	0.0	5.0
2	4.0	9.6	25.0	0.0	0.0	0.0	0.	0.	0.0	13.0
3	4.0	9.7	21.0	0.0	0.0	0.0	0.	0.	0.0	9.0
4	4.0	9.6	17.0	0.0	0.0	0.0	0.	0.	0.0	8.0
5	4.1	0.0	7.5	0.0	0.0	0.0	0.	0.	0.0	0.0
6	4.4	9.6	17.0	0.0	0.0	0.0	0.	0.	0.0	7.0
7	4.1	9.6	12.0	0.0	0.0	0.0	0.	0.	0.0	3.5
8	4.2	0.0	9.0	0.0	0.0	0.0	0.	0.	0.0	0.0
9	4.2	9.6	25.0	0.0	0.0	0.0	0.	0.	0.0	7.0
10	4.1	9.6	12.0	0.0	0.0	0.0	0.	0.	0.0	5.0
11	4.5	9.6	25.0	0.0	0.0	0.0	0.	0.	0.0	13.5
12	4.1	9.7	19.0	0.0	0.0	0.0	0.	0.	0.0	7.0
13	4.1	9.6	16.0	0.0	0.0	0.0	0.	0.	0.0	7.0
14	4.2	9.6	10.5	0.0	0.0	0.0	0.	0.	0.0	8.0
15	4.5	9.6	8.5	0.0	0.0	0.0	0.	0.	0.0	8.0
16	4.5	0.0	6.5	0.0	0.0	0.0	0.	0.	0.0	0.0
17	4.1	9.6	7.5	0.0	0.0	0.0	0.	0.	0.0	6.0
18	4.2	9.6	15.5	0.0	0.0	0.0	0.	0.	0.0	8.0
19	4.3	9.6	7.5	0.0	0.0	0.0	0.	0.	0.0	5.5
20	4.4	9.6	14.0	0.0	0.0	0.0	0.	0.	0.0	5.0
MEAN	4.2	9.6	14.4	0.0	0.0	0.0	0.	0.	0.0	7.4
STD DEV	.2	.0	6.1	0.0	0.0	0.0	0.	0.	0.0	2.6

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA NOVA STUDY AREA SWEETWATER DATE 29 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.4	9.6	18.5	0.0	0.0	0.0	0.	0.	1.3	10.0
2	4.3	9.6	29.0	0.0	0.0	0.0	0.	0.	.9	15.0
3	4.3	9.6	17.0	0.0	0.0	0.0	0.	0.	1.0	6.0
4	4.3	9.6	22.0	0.0	0.0	0.0	0.	0.	1.2	7.8
5	4.2	0.0	7.0	0.0	0.0	0.0	0.	0.	.7	0.0
6	4.4	9.6	15.0	0.0	0.0	0.0	0.	0.	1.6	6.0
7	4.2	9.4	10.5	0.0	0.0	0.0	0.	0.	0.0	6.0
8	4.3	9.0	8.5	0.0	0.0	0.0	0.	0.	0.0	0.0
9	4.3	9.6	27.5	0.0	0.0	0.0	0.	0.	.6	12.0
10	4.2	9.6	15.5	0.0	0.0	0.0	0.	0.	0.0	7.0
11	4.3	9.6	25.0	0.0	0.0	0.0	0.	0.	1.4	10.5
12	4.2	9.6	23.5	0.0	0.0	0.0	0.	0.	0.0	7.5
13	4.3	9.6	26.0	0.0	0.0	0.0	0.	0.	.4	7.0
14	4.2	9.6	16.5	0.0	0.0	0.0	0.	0.	0.0	10.0
15	4.2	9.6	12.0	0.0	0.0	0.0	0.	0.	0.0	8.5
16	4.2	0.0	8.0	0.0	0.0	0.0	0.	0.	0.0	0.0
17	4.0	9.6	7.0	0.0	0.0	0.0	0.	0.	0.0	5.5
18	4.1	9.6	16.0	0.0	0.0	0.0	0.	0.	0.0	7.8
19	4.1	9.6	8.5	0.0	0.0	0.0	0.	0.	0.0	6.0
20	4.2	9.6	15.5	0.0	0.0	0.0	0.	0.	0.0	6.5
MEAN	4.2	9.6	16.4	0.0	0.0	0.0	0.	0.	1.0	8.2
STD DEV	.1	.1	7.1	0.0	0.0	0.0	0.	0.	.4	2.6

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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   ARTEMISIA NOVA         STUDY AREA SWEETWATER           DATE 12  AUGUST   1981
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  PLANT PHENOLOGICAL  PLANT   PLANT   PLANT   PLANT   PLANT    DEAD      NEW    NEW
  NO.    STAGE SCORE  HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH     VEG.   SEED
          VEG.  REPR.                                 CLASS   PERCENT    TWIG   STALK
                                                                         LNGTH  LNGTH
*******************************************************************************
     1    4.4   9.7    20.8    0.0     0.0     0.0     0.         0.      0.0   10.1
     2    4.3   9.8    15.7    0.0     0.0     0.0     0.         0.      0.0   14.2
     3    4.3   9.7    13.7    0.0     0.0     0.0     0.         0.      0.0    7.2
     4    4.4   9.6    17.0    0.0     0.0     0.0     0.         0.      0.0    7.7
     5    4.2   0.0     7.9    0.0     0.0     0.0     0.         0.      0.0    0.0
     6    4.5   9.5    10.7    0.0     0.0     0.0     0.         0.      0.0    6.8
     7    4.2   9.5    10.5    0.0     0.0     0.0     0.         0.      0.0    4.0 DECADENT
     8    4.5   9.3    10.6    0.0     0.0     0.0     0.         0.      0.0    2.7
     9    4.6   9.7    19.0    0.0     0.0     0.0     0.         0.      0.0   12.6
    10    4.2   9.5    11.3    0.0     0.0     0.0     0.         0.      0.0    8.0
    11    4.4   9.7    15.6    0.0     0.0     0.0     0.         0.      0.0   14.0
    12    4.2   9.7    15.7    0.0     0.0     0.0     0.         0.      0.0    7.6
    13    4.3   9.7    19.0    0.0     0.0     0.0     0.         0.      0.0   16.1
    14    4.2   9.8     9.0    0.0     0.0     0.0     0.         0.      0.0    9.6
    15    4.2   9.5     9.5    0.0     0.0     0.0     0.         0.      0.0    9.0
    16    4.2   9.2     5.8    0.0     0.0     0.0     0.         0.      0.0    2.0
    17    4.1   9.5    11.9    0.0     0.0     0.0     0.         0.      0.0    6.1 DECADENT
    18    4.2   9.6    11.4    0.0     0.0     0.0     0.         0.      0.0    9.0 DECADENT
    19    4.5   9.5     8.9    0.0     0.0     0.0     0.         0.      0.0    4.6
    20    4.4   9.7    12.6    0.0     0.0     0.0     0.         0.      0.0   10.5

    MEAN  4.3   9.6    12.8    0.0     0.0     0.0     0.         0.      0.0    8.5

 STD DEV   .1    .2     4.1    0.0     0.0     0.0     0.         0.      0.0    3.9

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
  ARTEMISIA NOVA          STUDY AREA SWEETWATER              DATE 24  AUGUST   1981
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  PLANT PHENOLOGICAL   PLANT  PLANT   PLANT   PLANT   PLANT   DEAD     NEW   NEW
  NO.   STAGE SCORE    HGHT   LNGTH   WIDTH   DIAM    AGE     BRANCH   VEG.  SEED
        VEG.  REPR.                                   CLASS   PERCENT  TWIG  STALK
                                                                       LNGTH LNGTH
*************************************************************************************
    1    4.6   9.8     23.4   0.0     0.0     0.0     0.       0.      1.0   9.2
    2    4.6   9.7     28.2   0.0     0.0     0.0     0.       0.       .5  14.2
    3    4.3   9.7     22.0   0.0     0.0     0.0     0.       0.      0.0   9.0
    4    4.4   9.7     19.6   0.0     0.0     0.0     0.       0.       .5   8.2
    5    4.5   0.0      7.0   0.0     0.0     0.0     0.       0.      1.0   0.0
    6    4.5   9.6     16.8   0.0     0.0     0.0     0.       0.       .5   5.8
    7    4.3   9.5     12.0   0.0     0.0     0.0     0.       0.       .3   3.8
    8    4.5   0.0     11.0   0.0     0.0     0.0     0.       0.      0.0   0.0
    9    4.7   9.7     27.5   0.0     0.0     0.0     0.       0.      1.5  11.5
   10    4.3   9.6     13.5   0.0     0.0     0.0     0.       0.       .5   3.9
   11    4.7   9.8     26.5   0.0     0.0     0.0     0.       0.      2.0  14.0
   12    4.2   9.6     21.5   0.0     0.0     0.0     0.       0.      0.0   7.8
   13    4.3   9.8     26.5   0.0     0.0     0.0     0.       0.       .5   8.0
   14    4.2   9.7     14.5   0.0     0.0     0.0     0.       0.      0.0  10.2
   15    4.3   9.6      9.9   0.0     0.0     0.0     0.       0.       .3   7.3
   16    4.3   0.0      8.0   0.0     0.0     0.0     0.       0.       .5   0.0
   17    4.2   0.0     11.0   0.0     0.0     0.0     0.       0.      0.0   0.0
   18    4.2   9.7     19.4   0.0     0.0     0.0     0.       0.      0.0   0.0
   19    4.5   0.0     12.5   0.0     0.0     0.0     0.       0.      0.0   8.0
   20    4.5   9.7     16.5   0.0     0.0     0.0     0.       0.       .5   0.0
                                                                       1.0   7.3


   MEAN  4.4   9.7     17.4   0.0     0.0     0.0     0.       0.       .8   8.5

 STD DEV  .2    .1      6.8   0.0     0.0     0.0     0.       0.       .5   3.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA NOVA        STUDY AREA SWEETWATER          DATE 12  SEPT      1981
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PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW    NEW
NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH    VEG.   SEED
       VEG.  REPR.                                   CLASS   PERCENT   TWIG   STALK
                                                                       LNGTH  LNGTH
**************************************************************************************
  1     4.9  11.5    19.0    0.0     0.0     0.0     0.        0.       .5    7.0
  2     4.9  11.4    27.0    0.0     0.0     0.0     0.        0.      1.0   15.0
  3     5.0  11.5    18.0    0.0     0.0     0.0     0.        0.       .5    9.0
  4     4.9  11.5    23.0    0.0     0.0     0.0     0.        0.       .5    8.0
  5     4.9  11.4    20.0    0.0     0.0     0.0     0.        0.       .5    9.0
  6     4.9  11.5    17.0    0.0     0.0     0.0     0.        0.      1.0    7.0
  7     5.0   0.0    10.0    0.0     0.0     0.0     0.        0.       .2    0.0
  8     5.0   0.0     8.5    0.0     0.0     0.0     0.        0.       .1    0.0
  9     4.9  11.5    21.0    0.0     0.0     0.0     0.        0.      1.0    7.5
 10     5.0  11.5    14.0    0.0     0.0     0.0     0.        0.      1.0    6.0
 11     4.9  11.4    17.0    0.0     0.0     0.0     0.        0.      1.0   13.0
 12     5.0  11.5    19.0    0.0     0.0     0.0     0.        0.       .5    9.0
 13     4.9  11.5    18.0    0.0     0.0     0.0     0.        0.       .5    6.0
 14     4.9  11.4    14.0    0.0     0.0     0.0     0.        0.       .5    8.0
 15     4.9  11.5    10.0    0.0     0.0     0.0     0.        0.      1.5    7.0
 16     5.0   0.0     6.0    0.0     0.0     0.0     0.        0.      1.0    0.0
 17     5.0   0.0     9.5    0.0     0.0     0.0     0.        0.       .5    0.0
 18     4.9  11.5    17.0    0.0     0.0     0.0     0.        0.      1.0    9.0
 19     4.9   0.0    10.5    0.0     0.0     0.0     0.        0.       .5    0.0
 20     4.9  11.4    16.0    0.0     0.0     0.0     0.        0.       .5    7.0


  MEAN  4.9  11.5    15.7    0.0     0.0     0.0     0.        0.       .7    8.5

STD DEV  .0    .0     5.4    0.0     0.0     0.0     0.        0.       .3    2.5


 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA BUD KIMBAL          DATE  2  MAY      1981
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW    NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.   SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG   STALK
                                                                 LNGTH  LNGTH
*************************************************************************************
   1     2.8   9.0    0.0    0.0    0.0    0.0    0.       0.     0.0    0.0
   2     3.3   0.0    0.0    0.0    0.0    0.0    0.       0.     0.0    0.0
   3     3.1   0.0    0.0    0.0    0.0    0.0    0.       0.     0.0    0.0
   4     3.1   0.0    0.0    0.0    0.0    0.0    0.       0.     0.0    0.0
   5     2.9   0.0    0.0    0.0    0.0    0.0    0.       0.     0.0    0.0
   6     2.8   0.0    0.0    0.0    0.0    0.0    0.       0.     0.0    0.0
   7     2.8   0.0    0.0    0.0    0.0    0.0    0.       0.     0.0    0.0
   8     2.7   0.0    0.0    0.0    0.0    0.0    0.       0.     0.0    0.0
   9     2.7   0.0    0.0    0.0    0.0    0.0    0.       0.     0.0    0.0
  10     2.6   0.0    0.0    0.0    0.0    0.0    0.       0.     0.0    0.0
  11     2.6   0.0    0.0    0.0    0.0    0.0    0.       0.     0.0    0.0
  12     2.8   0.0    0.0    0.0    0.0    0.0    0.       0.     0.0    0.0
  13     3.0   0.0    0.0    0.0    0.0    0.0    0.       0.     0.0    0.0
  14     3.0   9.0    0.0    0.0    0.0    0.0    0.       0.     0.0    0.0
  15     2.8   0.0    0.0    0.0    0.0    0.0    0.       0.     0.0    0.0
  16     2.9   9.0    0.0    0.0    0.0    0.0    0.       0.     0.0    0.0
  17     2.9   0.0    0.0    0.0    0.0    0.0    0.       0.     0.0    0.0
  18     2.7   0.0    0.0    0.0    0.0    0.0    0.       0.     0.0    0.0
  19     2.9   0.0    0.0    0.0    0.0    0.0    0.       0.     0.0    0.0
  20     2.8   0.0    0.0    0.0    0.0    0.0    0.       0.     0.0    0.0


    MEAN 2.9   9.0    0.0    0.0    0.0    0.0    0.       0.     0.0    0.0

 STD DEV  .2   0.0    0.0    0.0    0.0    0.0    0.       0.     0.0    0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA BUD KIMBAL          DATE 19   MAY       1981
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH  VEG.  SEED
         VEG.  REPR.                             CLASS  PERCENT TWIG  STALK
                                                                LNGTH LNGTH
***********************************************************************
    1    3.4   9.1   17.0   27.0   16.0   0.0    0.      0.     0.0   0.0 DECADENT  SEGMENT
    2    3.2   0.0   11.0   20.0   14.0   0.0    0.      0.     0.0   0.0
    3    3.2   9.0   10.0   22.0    8.0   0.0    0.      0.     0.0   0.0 80 % DECADENT
    4    3.3   0.0   18.0   36.0   21.0   0.0    0.      0.     0.0   0.0
    5    3.1   0.0   34.0   79.0   34.0   0.0    0.      0.     0.0   0.0
    6    3.2   0.0   21.0   32.0   22.0   0.0    0.      0.     0.0   0.0
    7    3.1   9.1   14.0   16.0    8.0   0.0    0.      0.     0.0   0.0
    8    3.2   9.0   31.0   69.0   35.0   0.0    0.      0.     0.0   0.0
    9    3.2   0.0   11.0   27.0   23.0   0.0    0.      0.     0.0   0.0
   10    3.1   9.0   14.0   28.0   18.0   0.0    0.      0.     0.0   0.0
   11    3.2   9.0   20.0   49.0   38.0   0.0    0.      0.     0.0   0.0
   12    3.0   0.0    9.0   13.0    7.0   0.0    0.      0.     0.0   0.0
   13    3.2   0.0   12.0   31.0   16.0   0.0    0.      0.     0.0   0.0
   14    3.2   9.1   28.0   31.0   15.0   0.0    0.      0.     0.0   0.0
   15    3.2   9.0   22.0   36.0   22.0   0.0    0.      0.     0.0   0.0
   16    3.1   9.1   18.0   23.0   11.0   0.0    0.      0.     0.0   0.0
   17    3.2   9.0   46.0   61.0   50.0   0.0    0.      0.     0.0   0.0
   18    3.3   9.0   45.0   66.0   18.0   0.0    0.      0.     0.0   0.0 80% RECENT DEAD
   19    3.1   0.0   20.0   33.0   15.0   0.0    0.      0.     0.0   0.0
   20    3.2   0.0    3.0     .4     .4   0.0    0.      0.     0.0   0.0

   MEAN  3.2   9.0   20.2   35.0   19.6   0.0    0.      0.     0.0   0.0

 STD DEV  .1    .1   11.5   20.2   11.9   0.0    0.      0.     0.0   0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA BUD KIMBAL   DATE 02 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH	
1	3.4	9.3	20.0	0.0	0.0	0.0	0.	0.	0.0	0.0	
2	3.2	9.0	10.3	0.0	0.0	0.0	0.	0.	0.0	0.0	
3	3.4	9.3	10.0	0.0	0.0	0.0	0.	0.	0.0	0.0	80% DECADENT
4	3.3	9.3	21.0	0.0	0.0	0.0	0.	0.	0.0	0.0	
5	3.3	9.3	34.0	0.0	0.0	0.0	0.	0.	0.0	0.0	
6	3.4	9.3	25.0	0.0	0.0	0.0	0.	0.	0.0	0.0	
7	3.4	9.3	17.5	0.0	0.0	0.0	0.	0.	0.0	0.0	
8	3.3	9.3	21.0	0.0	0.0	0.0	0.	0.	0.0	0.0	10% DECADENT
9	3.3	9.3	13.0	0.0	0.0	0.0	0.	0.	0.0	0.0	
10	3.4	9.3	14.5	0.0	0.0	0.0	0.	0.	0.0	0.0	
11	3.4	9.3	25.0	0.0	0.0	0.0	0.	0.	0.0	0.0	
12	3.3	0.0	12.0	0.0	0.0	0.0	0.	0.	0.0	0.0	
13	3.3	0.0	13.0	0.0	0.0	0.0	0.	0.	0.0	0.0	
14	3.4	9.3	29.5	0.0	0.0	0.0	0.	0.	0.0	0.0	
15	3.3	9.4	25.0	0.0	0.0	0.0	0.	0.	0.0	0.0	
16	3.3	9.3	18.0	0.0	0.0	0.0	0.	0.	0.0	0.0	
17	3.4	9.4	47.0	0.0	0.0	0.0	0.	0.	0.0	0.0	
18	3.4	9.3	44.0	0.0	0.0	0.0	0.	0.	0.0	0.0	
19	3.3	9.3	19.0	0.0	0.0	0.0	0.	0.	0.0	0.0	
20	3.3	0.0	5.0	0.0	0.0	0.0	0.	0.	0.0	0.0	
MEAN	3.3	9.3	21.2	0.0	0.0	0.0	0.	0.	0.0	0.0	
STD DEV	.1	.1	10.9	0.0	0.0	0.0	0.	0.	0.0	0.0	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMESIA TRIDENTATA   STUDY AREA BUD KIMBAL          DATE 17  JUNE     1981
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PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD   NEW    NEW
NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH  VEG.   SEED
       VEG.  REPR.                              CLASS  PERCENT TWIG   STALK
                                                               LNGTH  LNGTH
*************************************************************************************
  1    3.7   9.6    19.5    0.0    0.0    0.0    5.     30.    0.0    7.5
  2    3.7   0.0    10.5    0.0    0.0    0.0    3.      5.    0.0    0.0
  3    3.6   9.5    13.0    0.0    0.0    0.0    5.     80.    0.0    6.5
  4    3.9   9.5    23.5    0.0    0.0    0.0    4.      0.    0.0    8.0
  5    3.7   9.6    31.5    0.0    0.0    0.0    4.     10.    0.0    5.0
  6    3.6   9.5    21.0    0.0    0.0    0.0    4.      5.    0.0    6.0
  7    3.7   9.5    28.0    0.0    0.0    0.0    4.     20.    0.0    7.8
  8    4.0   9.6    34.0    0.0    0.0    0.0    4.     10.    0.0   10.5
  9    4.0   9.5    15.0    0.0    0.0    0.0    3.     20.    0.0    7.0
 10    3.8   9.6    16.5    0.0    0.0    0.0    4.     15.    0.0    8.8
 11    3.8   9.5    27.0    0.0    0.0    0.0    4.      5.    0.0    5.0
 12    3.6   0.0     9.0    0.0    0.0    0.0    2.      5.    0.0    0.0
 13    3.8   0.0     0.0    0.0    0.0    0.0    5.     95.    0.0    0.0
 14    3.9   9.5    27.5    0.0    0.0    0.0    4.     10.    0.0    8.0
 15    3.8   9.5    26.0    0.0    0.0    0.0    4.     10.    0.0    9.8
 16    3.8   9.5    16.5    0.0    0.0    0.0    5.     70.    0.0   10.5
 17    4.0   9.6    47.6    0.0    0.0    0.0    4.     20.    0.0   10.5
 18    4.0   9.5    45.0    0.0    0.0    0.0    5.     80.    0.0    5.5
 19    3.8   9.6    35.5    0.0    0.0    0.0    5.     40.    0.0    6.7
 20    3.8   0.0     5.0    0.0    0.0    0.0    1.      0.    0.0    0.0


  MEAN 3.8   9.5    23.8    0.0    0.0    0.0    4.     29.    0.0    7.7

STD DEV .1    .1    11.6    0.0    0.0    0.0    1.     30.    0.0    1.9


  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA BUD KIMBAL          DATE 29  JUNE    1981
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH  VEG.  SEED
        VEG.  REPR.                              CLASS   PERCENT TWIG  STALK
                                                                 LNGTH LNGTH
*******************************************************************************
   1    4.2   9.6    20.0   0.0    0.0    0.0    0.       0.     0.0  10.0
   2    4.1   0.0    10.0   0.0    0.0    0.0    0.       0.     0.0   0.0
   3    4.2   9.5    12.0   0.0    0.0    0.0    0.       0.     0.0   7.0
   4    4.1   9.6    23.0   0.0    0.0    0.0    0.       0.     0.0   8.0
   5    4.1   9.5    33.0   0.0    0.0    0.0    0.       0.     0.0   5.0
   6    4.2   9.6    21.0   0.0    0.0    0.0    0.       0.     0.0   8.0 NEW PLANT
   7    4.0   9.6    39.0   0.0    0.0    0.0    0.       0.     0.0   7.0 NEW PLANT
   8    4.0   9.6    46.0   0.0    0.0    0.0    0.       0.     0.0  10.0 NEW PLANT
   9    4.0   9.5    15.0   0.0    0.0    0.0    0.       0.     0.0   8.0
  10    4.0   9.5    18.0   0.0    0.0    0.0    0.       0.     0.0   8.0
  11    4.2   9.6    23.5   0.0    0.0    0.0    0.       0.     0.0   7.0
  12    4.2   0.0    10.0   0.0    0.0    0.0    0.       0.     0.0   0.0
  13    4.2   0.0    11.0   0.0    0.0    0.0    0.       0.     0.0   0.0
  14    4.6   9.7    30.0   0.0    0.0    0.0    0.       0.     0.0  10.0
  15    4.3   9.6    25.0   0.0    0.0    0.0    0.       0.     0.0   8.0
  16    4.4   9.6    22.0   0.0    0.0    0.0    0.       0.     0.0   8.0
  17    4.1   9.7    48.0   0.0    0.0    0.0    0.       0.     0.0  10.0
  18    4.4   9.6    48.0   0.0    0.0    0.0    0.       0.     0.0   7.0
  19    4.4   9.6    30.0   0.0    0.0    0.0    0.       0.     0.0   8.0
  20    4.6   0.0     6.0   0.0    0.0    0.0    0.       0.     0.0   0.0 SEEDLING

  MEAN  4.2   9.6    24.5   0.0    0.0    0.0    0.       0.     0.0   8.1

STD DEV  .2    .1    12.9   0.0    0.0    0.0    0.       0.     0.0   1.4

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA BUD KIMBAL           DATE 14  JULY      1981
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 PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW    NEW
 NO.    STAGE SCORE   HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH   VEG.   SEED
        VEG.  REPR.                                   CLASS   PERCENT  TWIG   STALK
                                                                       LNGTH  LNGTH
**************************************************************************************
   1     4.5   9.6    22.0     0.0     0.0     0.0     5.       5.     1.0    7.0
   2     4.2   0.0     8.5     0.0     0.0     0.0     2.       5.      .1    0.0
   3     4.4   9.6    11.5     0.0     0.0     0.0     5.      90.     1.5    7.0
   4     4.5   9.6    22.4     0.0     0.0     0.0     2.       0.     1.3    8.3
   5     4.4   9.6    37.0     0.0     0.0     0.0     4.      10.      .4    6.4
   6     4.3   9.6    23.0     0.0     0.0     0.0     4.       5.      .2    8.2
   7     4.5   9.5    19.0    18.0    10.0     0.0     2.       5.     3.0    7.5 NEW PLANT
   8     4.4   9.6    35.0     0.0     0.0     0.0     4.      10.     1.5    9.8
   9     4.4   9.6    14.5     0.0     0.0     0.0     2.      50.      .4    7.1
  10     4.4   9.6    17.0     0.0     0.0     0.0     2.      15.      .3    9.3
  11     4.5   9.5    26.5     0.0     0.0     0.0     4.      10.      .4    6.1
  12     4.4   0.0    10.0     0.0     0.0     0.0     2.      60.      .6    0.0
  13     4.5   9.5    11.5     0.0     0.0     0.0     2.      10.     1.7    3.5
  14     4.5   9.6    28.0     0.0     0.0     0.0     3.       5.     2.0    8.8
  15     4.4   9.6    27.0     0.0     0.0     0.0     3.      15.      .4    9.5
  16     4.5   9.5    21.5     0.0     0.0     0.0     5.      65.     3.5    6.6
  17     4.4   9.5    48.5     0.0     0.0     0.0     4.      15.     1.8    9.8
  18     4.4   9.5    45.0     0.0     0.0     0.0     5.      85.     1.0    7.2
  19     4.4   0.0    22.0     0.0     0.0     0.0     5.      80.      .4    0.0
  20     4.4   9.5    38.0     0.0     0.0     0.0     5.      80.      .8    4.8


   MEAN  4.4   9.6    24.4    18.0    10.0     0.0     4.      33.     1.1    7.5

 STD DEV  .1    .1    11.4     0.0     0.0     0.0     1.      33.      .9    1.7


  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA BUD KIMBAL          DATE 28  JULY     1981
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
****************************************************************************
   1     4.3   9.6   21.5    0.0    0.0    0.0    0.      0.     0.0   9.0
   2     4.1   0.0   11.0    0.0    0.0    0.0    0.      0.     0.0   0.0
   3     4.2   9.6   14.0    0.0    0.0    0.0    0.      0.     0.0   7.0
   4     4.2   9.6   23.0    0.0    0.0    0.0    0.      0.     0.0   8.0
   5     4.2   9.6   36.0    0.0    0.0    0.0    0.      0.     0.0   6.0
   6     4.2   9.6   23.0    0.0    0.0    0.0    0.      0.     0.0   9.0
   7     4.4   9.6   28.0    0.0    0.0    0.0    0.      0.     0.0   7.0
   8     4.4   9.6   42.0    0.0    0.0    0.0    0.      0.     0.0  11.0
   9     4.2   9.6   16.0    0.0    0.0    0.0    0.      0.     0.0   6.0
  10     4.5   0.0   13.0    0.0    0.0    0.0    0.      0.     0.0   6.0
  11     4.5   9.4   23.0    0.0    0.0    0.0    0.      0.     0.0   0.0
  12     4.1   0.0   16.0    0.0    0.0    0.0    0.      0.     0.0   9.0
  13     4.6   9.5   15.0    0.0    0.0    0.0    0.      0.     0.0   0.0
  14     4.6   9.6   29.0    0.0    0.0    0.0    0.      0.     0.0   3.0
  15     4.6   9.6   29.0    0.0    0.0    0.0    0.      0.     0.0  10.0
  16     4.4   9.6   22.0    0.0    0.0    0.0    0.      0.     0.0   7.0
  17     4.2   9.6   50.0    0.0    0.0    0.0    0.      0.     0.0   7.5
  18     4.4   9.6   45.0    0.0    0.0    0.0    0.      0.     0.0  13.0
  19     4.6   9.6   37.0    0.0    0.0    0.0    0.      0.     0.0   6.0
  20     4.4   9.6   31.0   33.0   15.0    0.0    5.     95.     0.0   7.0
                                                                        8.0 NEW PLANT

  MEAN   4.4   9.6   26.2   16.5    7.5    0.0    5.     95.     0.0   7.9

STD DEV   .2    .1   11.2   23.3   10.6    0.0    0.      0.     0.0   2.3

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA STUDY AREA BUD KIMBAL DATE 11 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.4	9.6	22.0	0.0	0.0	0.0	0.	0.	1.0	10.0
2	4.2	0.0	10.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	4.3	9.6	13.0	0.0	0.0	0.0	0.	0.	.4	6.8
4	4.3	9.7	23.0	0.0	0.0	0.0	0.	0.	.5	8.5
5	4.2	9.5	31.0	0.0	0.0	0.0	0.	0.	0.0	5.3
6	4.4	9.7	22.0	0.0	0.0	0.0	0.	0.	1.5	10.4
7	4.5	9.4	19.5	0.0	0.0	0.0	0.	0.	3.0	8.0
8	4.4	9.7	42.0	0.0	0.0	0.0	0.	0.	1.0	12.5
9	4.3	9.7	13.5	0.0	0.0	0.0	0.	0.	.5	9.0
10	4.5	9.7	16.0	0.0	0.0	0.0	0.	0.	0.0	10.0
11	4.5	9.6	23.0	0.0	0.0	0.0	0.	0.	0.0	6.0
12	4.1	0.0	10.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	4.6	9.5	13.0	0.0	0.0	0.0	0.	0.	.5	3.5
14	4.6	9.5	26.0	0.0	0.0	0.0	0.	0.	3.0	9.0
15	4.6	9.5	21.5	0.0	0.0	0.0	0.	0.	1.0	9.0
16	4.5	0.0	16.5	0.0	0.0	0.0	0.	0.	5.0	0.0
17	4.4	9.6	53.0	0.0	0.0	0.0	0.	0.	1.5	12.5
18	4.4	9.5	45.0	0.0	0.0	0.0	0.	0.	.8	8.5
19	4.6	9.4	21.0	0.0	0.0	0.0	0.	0.	.5	5.0
20	4.4	9.6	28.0	0.0	0.0	0.0	0.	0.	0.0	9.5
MEAN	4.4	9.6	23.5	0.0	0.0	0.0	0.	0.	1.4	8.4
STD DEV	.1	.1	11.7	0.0	0.0	0.0	0.	0.	1.3	2.5

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMESIA TRIDENTATA   STUDY AREA BUD KIMBAL   DATE 25 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.4	9.6	28.0	0.0	0.0	0.0	0.	0.	0.0	6.5
2	4.3	9.4	10.5	0.0	0.0	0.0	0.	0.	0.0	3.0
3	4.4	9.6	13.2	0.0	0.0	0.0	0.	0.	0.0	6.0
4	4.6	9.7	24.7	0.0	0.0	0.0	0.	0.	0.0	7.3
5	4.5	9.5	33.7	0.0	0.0	0.0	0.	0.	0.0	7.2
6	4.4	9.7	24.2	0.0	0.0	0.0	0.	0.	0.0	9.8
7	4.5	9.4	20.0	0.0	0.0	0.0	0.	0.	0.0	4.0
8	4.6	9.7	41.0	0.0	0.0	0.0	0.	0.	0.0	11.6
9	4.5	9.7	18.5	0.0	0.0	0.0	0.	0.	0.0	9.6
10	4.5	9.7	19.0	0.0	0.0	0.0	0.	0.	0.0	5.0
11	4.6	9.6	23.0	0.0	0.0	0.0	0.	0.	0.0	6.0
12	4.1	0.0	9.5	0.0	0.0	0.0	0.	0.	0.0	0.0
13	4.6	9.5	11.5	0.0	0.0	0.0	0.	0.	0.0	3.5
14	4.6	9.5	30.5	0.0	0.0	0.0	0.	0.	0.0	3.6
15	4.6	9.5	21.9	0.0	0.0	0.0	0.	0.	0.0	6.2
16	4.6	9.4	18.0	0.0	0.0	0.0	0.	0.	0.0	8.0
17	4.6	9.7	53.0	0.0	0.0	0.0	0.	0.	0.0	12.0
18	4.5	9.5	44.0	0.0	0.0	0.0	0.	0.	0.0	6.0
19	4.6	9.5	24.0	0.0	0.0	0.0	0.	0.	0.0	4.0
20	4.5	9.6	30.0	0.0	0.0	0.0	0.	0.	0.0	7.8
MEAN	4.5	9.6	24.9	0.0	0.0	0.0	0.	0.	0.0	6.7
STD DEV	.1	.1	11.4	0.0	0.0	0.0	0.	0.	0.0	2.6

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMESIA TRIDENTATA   STUDY AREA BUD KIMBAL          DATE 12  SEPT      1981
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PLANT PHENCLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW    NEW
NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH   VEG.   SEED
       VEG.  REPR.                                   CLASS   PERCENT  TWIG   STALK
                                                                      LNGTH  LNGTH
**************************************************************************************
  1     5.0  11.3    23.2    0.0     0.0     0.0     0.       0.      2.4   10.0
  2     5.1   0.0     9.3    0.0     0.0     0.0     0.       0.       .3    0.0
  3     5.1  11.5    11.3    0.0     0.0     0.0     0.       0.       .2    6.5
  4     5.0  11.4    23.0    0.0     0.0     0.0     0.       0.      2.0    8.5
  5     5.2  11.6    33.0    0.0     0.0     0.0     0.       0.      1.0    5.0
  6     5.2  11.6    19.4    0.0     0.0     0.0     0.       0.      2.5    6.4
  7     5.3   0.0    15.4    0.0     0.0     0.0     0.       0.      1.1    0.0
  8     5.2  11.4    37.5    0.0     0.0     0.0     0.       0.       .8   12.6
  9     5.2  11.3    15.7    0.0     0.0     0.0     0.       0.       .7    8.8
 10     5.3  11.6    16.8    0.0     0.0     0.0     0.       0.       .8    6.5
 11     5.2  11.5    22.5    0.0     0.0     0.0     0.       0.       .5    6.0
 12     5.3   0.0    11.0    0.0     0.0     0.0     0.       0.       .5    0.0
 13     5.4   0.0    17.2    0.0     0.0     0.0     0.       0.       .4    0.0
 14     5.2  10.5    29.2    0.0     0.0     0.0     0.       0.      1.0    9.0
 15     5.2   0.0    21.0    0.0     0.0     0.0     0.       0.      1.0    0.0
 16     5.3   0.0    17.6    0.0     0.0     0.0     0.       0.      1.6    0.0
 17     5.3  10.5    53.0    0.0     0.0     0.0     0.       0.      1.7   10.0
 18     5.2   0.0    39.5    0.0     0.0     0.0     0.       0.      1.2    0.0
 19     5.2   0.0    19.5    0.0     0.0     0.0     0.       0.      1.0    0.0
 20     5.3   0.0     9.5    0.0     0.0     0.0     0.       0.      3.0    0.0


  MEAN  5.2  11.3    22.2    0.0     0.0     0.0     0.       0.      1.2    8.1

STD DEV  .1    .4    11.2    0.0     0.0     0.0     0.       0.       .8    2.3


 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA CEDAR MTN.             DATE 01  MAY      1981
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 PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD     NEW    NEW
 NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.   SEED
        VEG.  REPR.                               CLASS  PERCENT  TWIG   STALK
                                                                  LNGTH  LNGTH
*******************************************************************************
   1    3.2   0.0     10.0    0.0    0.0   15.0   3.      15.     0.0    0.0
   2    3.2   0.0     11.0   23.0   12.0    0.0   5.      60.     0.0    0.0
   3    3.1   0.0     36.0    0.0    0.0   63.0   4.      20.     0.0    0.0
   4    3.2   0.0      9.0    0.0    0.0    7.0   2.      10.     0.0    0.0
   5    3.2   0.0     20.0   28.0   18.0    0.0   3.       5.     0.0    0.0
   6    3.2   0.0     25.0    0.0    0.0   18.0   4.       3.     0.0    0.0
   7    3.3   0.0     34.0   58.0   29.0    0.0   4.      10.     0.0    0.0
   8    3.3   0.0     35.0    0.0    0.0   25.0   4.       2.     0.0    0.0
   9    3.2   0.0     44.0   99.0   44.0    0.0   4.      25.     0.0    0.0
  10    3.3   0.0     50.0    0.0    0.0   87.0   4.       5.     0.0    0.0
  11    3.2   0.0     48.0   88.0   59.0    0.0   4.       7.     0.0    0.0
  12    3.1   0.0     16.0   13.0    6.0    0.0   3.       9.     0.0    0.0
  13    3.3   0.0     54.0    0.0    0.0   95.0   4.       3.     0.0    0.0
  14    3.2   0.0     33.0    0.0    0.0   43.0   4.       5.     0.0    0.0
  15    3.3   0.0     25.0   46.0   16.0    0.0   4.       7.     0.0    0.0
  16    3.3   0.0     35.0   39.0   16.0    0.0   4.       7.     0.0    0.0
  17    3.3   0.0     52.0    0.0    0.0   77.0   4.       8.     0.0    0.0
  18    3.3   0.0     26.0    0.0    0.0   25.0   3.       2.     0.0    0.0
  19    3.3   0.0     38.0   37.0   13.0    0.0   4.      45.     0.0    0.0
  20    3.2   0.0     44.0    0.0    0.0   68.0   4.       2.     0.0    0.0


 MEAN   3.2   0.0     32.3   47.9   23.7   47.5   4.      12.     0.0    0.0

STD DEV  .1   0.0     14.2   29.1   17.3   31.5   1.      15.     0.0    0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA CEDAR MTN.          DATE 26  MAY      1981
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PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD     NEW    NEW
NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH    VEG.   SEED
       VEG.  REPR.                              CLASS  PERCENT   TWIG   STALK
                                                                 LNGTH  LNGTH
*******************************************************************************
  1     3.3   9.1    11.5   13.0   11.9   0.0    0.       0.      0.0    0.0
  2     3.3   9.1    13.5   26.2   21.5   0.0    0.       0.      0.0    0.0
  3     3.2   9.0    34.1   44.8   35.3   0.0    0.       0.      0.0    0.0  75% DECADENT
  4     3.2   9.0    10.0   12.2   10.1   0.0    0.       0.      0.0    0.0
  5     3.2   9.1    15.5   17.1   15.2   0.0    0.       0.      0.0    0.0
  6     3.1   9.1    23.2   31.5   25.6   0.0    0.       0.      0.0    0.0
  7     3.1   9.1    34.7   45.0   37.0   0.0    0.       0.      0.0    0.0
  8     3.2   9.2    32.0   40.0   29.0   0.0    0.       0.      0.0    0.0
  9     3.2   9.1    39.0   50.0   41.0   0.0    0.       0.      0.0    0.0
 10     3.2   9.1    45.0   92.0   77.0   0.0    0.       0.      0.0    0.0
 11     3.1   9.1    50.0  111.0   74.0   0.0    0.       0.      0.0    0.0
 12     3.1   9.0    16.5   14.0   10.0   0.0    0.       0.      0.0    0.0
 13     3.2   9.1    40.0  110.0   70.0   0.0    0.       0.      0.0    0.0
 14     3.1   9.1    31.0   43.0   37.0   0.0    0.       0.      0.0    0.0
 15     3.2   9.0    25.0   46.0   30.0   0.0    0.       0.      0.0    0.0
 16     3.1   9.0    31.0   40.0   24.0   0.0    0.       0.      0.0    0.0
 17     3.1   9.0    45.0   96.0   84.0   0.0    0.       0.      0.0    0.0
 18     3.1   9.1    28.0   32.0   26.0   0.0    0.       0.      0.0    0.0
 19     3.1   9.1    42.0   38.0   30.0   0.0    0.       0.      0.0    0.0
 20     3.2   9.0    40.0   91.0   78.0   0.0    0.       0.      0.0    0.0


  MEAN  3.2   9.1    30.4   49.6   38.3   0.0    0.       0.      0.0    0.0

STD DEV  .1    .1    12.1   32.2   24.4   0.0    0.       0.      0.0    0.0


 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA CEDAR MTN.   DATE 04 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.3	9.0	12.0	0.0	0.0	0.0	4.	80.	0.0	0.0
2	3.4	9.0	17.0	0.0	0.0	0.0	4.	45.	0.0	0.0
3	3.3	9.0	32.5	0.0	0.0	0.0	4.	3.	0.0	0.0
4	3.4	9.0	9.0	0.0	0.0	0.0	2.	5.	0.0	0.0
5	3.4	9.0	21.5	0.0	0.0	0.0	3.	10.	0.0	0.0
6	3.3	9.1	24.0	0.0	0.0	0.0	4.	0.	0.0	0.0
7	3.4	9.2	36.0	0.0	0.0	0.0	4.	0.	0.0	0.0
8	3.3	9.2	31.5	0.0	0.0	0.0	4.	0.	0.0	0.0
9	3.3	9.2	41.0	0.0	0.0	0.0	4.	35.	0.0	0.0
10	3.3	9.2	51.0	0.0	0.0	0.0	4.	10.	0.0	0.0
11	3.3	9.1	51.0	0.0	0.0	0.0	2.	10.	0.0	0.0
12	3.4	9.0	18.0	0.0	0.0	0.0	4.	0.	0.0	0.0
13	3.4	9.1	51.0	0.0	0.0	0.0	4.	0.	0.0	0.0
14	3.3	9.2	34.0	0.0	0.0	0.0	3.	0.	0.0	0.0
15	3.4	9.2	29.0	0.0	0.0	0.0	4.	0.	0.0	0.0
16	3.3	9.2	30.0	0.0	0.0	0.0	4.	0.	0.0	0.0
17	3.3	9.1	45.0	0.0	0.0	0.0	3.	10.	0.0	0.0
18	3.3	9.1	29.0	0.0	0.0	0.0	4.	0.	0.0	0.0
19	3.3	9.1	49.0	0.0	0.0	0.0	4.	5.	0.0	0.0
20	3.4	9.0	37.0	0.0	0.0	0.0	4.	0.	0.0	0.0
MEAN	3.3	9.1	32.4	0.0	0.0	0.0	4.	21.	0.0	0.0
STD DEV	.1	.1	13.0	0.0	0.0	0.0	1.	25.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA   STUDY AREA CEDAR MTN.   DATE 15 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE		PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
	VEG.	REPR.								
1	3.4	9.0	13.5	0.0	0.0	0.0	4.	80.	0.0	0.0
2	3.5	9.3	23.4	0.0	0.0	0.0	4.	50.	0.0	0.0
3	3.4	9.1	38.0	0.0	0.0	0.0	4.	5.	0.0	0.0
4	3.4	9.0	9.8	0.0	0.0	0.0	2.	6.	0.0	0.0
5	3.4	9.0	21.7	0.0	0.0	0.0	3.	20.	0.0	0.0
6	3.4	9.2	28.8	0.0	0.0	0.0	3.	10.	0.0	0.0
7	3.4	9.4	42.0	0.0	0.0	0.0	4.	15.	0.0	0.0
8	3.5	9.4	36.5	0.0	0.0	0.0	4.	5.	0.0	0.0
9	3.5	9.4	47.0	0.0	0.0	0.0	4.	42.	0.0	0.0
10	3.5	9.5	50.1	0.0	0.0	0.0	4.	7.	0.0	0.0
11	3.4	9.4	59.0	0.0	0.0	0.0	4.	3.	0.0	0.0
12	3.4	9.5	51.0	0.0	0.0	0.0	4.	2.	0.0	0.0
13	3.4	9.2	53.0	0.0	0.0	0.0	4.	2.	0.0	0.0
14	3.5	9.3	35.7	0.0	0.0	0.0	3.	5.	0.0	0.0
15	3.4	9.2	21.5	0.0	0.0	0.0	3.	7.	0.0	0.0
16	3.4	9.2	30.5	0.0	0.0	0.0	3.	10.	0.0	0.0
17	3.5	9.3	43.0	0.0	0.0	0.0	4.	3.	0.0	0.0
18	3.4	9.3	29.3	0.0	0.0	0.0	3.	0.	0.0	0.0
19	3.5	9.3	51.0	0.0	0.0	0.0	4.	5.	0.0	0.0
20	3.5	9.3	42.0	0.0	0.0	0.0	4.	2.	0.0	0.0
MEAN	3.4	9.3	36.3	0.0	0.0	0.0	4.	15.	0.0	0.0
STD DEV	.1	.2	13.8	0.0	0.0	0.0	1.	21.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA CEDAR MTN.            DATE 27  JUNE      1981
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  PLANT PHENOLOGICAL  PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW    NEW
  NO.   STAGE SCORE   HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH   VEG.   SEED
         VEG.  REPR.                                  CLASS   PERCENT  TWIG   STALK
                                                                       LNGTH  LNGTH
****************************************************************************************
    1     3.7   9.3   11.5     0.0     0.0     0.0    0.        0.      0.0    2.0
    2     3.6   0.0   14.5     0.0     0.0     0.0    0.        0.      0.0    0.0
    3     3.6   9.5   35.0     0.0     0.0     0.0    0.        0.      0.0    3.2
    4     3.7   0.0    9.8     0.0     0.0     0.0    0.        0.      0.0    0.0
    5     3.5   0.0   23.7     0.0     0.0     0.0    0.        0.      0.0    0.0
    6     3.6   9.6   29.0     0.0     0.0     0.0    0.        0.      0.0    6.6
    7     3.7   9.6   39.7     0.0     0.0     0.0    0.        0.      0.0    6.3
    8     4.0   9.6   35.7     0.0     0.0     0.0    0.        0.      0.0   10.8
    9     3.8   9.6   45.0     0.0     0.0     0.0    0.        0.      0.0    9.9
   10     4.0   9.6   57.5     0.0     0.0     0.0    0.        0.      0.0   14.2
   11     3.7   9.6   60.0     0.0     0.0     0.0    0.        0.      0.0    7.2
   12     4.0   9.7   68.0     0.0     0.0     0.0    0.        0.      0.0   15.0
   13     3.7   9.5   44.0     0.0     0.0     0.0    0.        0.      0.0    6.8
   14     3.7   9.5   38.0     0.0     0.0     0.0    0.        0.      0.0    5.6
   15     3.9   9.6   29.7     0.0     0.0     0.0    0.        0.      0.0    7.2
   16     3.7   9.6   34.5     0.0     0.0     0.0    0.        0.      0.0    8.2
   17     3.5   9.5   31.5     0.0     0.0     0.0    0.        0.      0.0    7.0
   18     3.6   9.3   28.5     0.0     0.0     0.0    0.        0.      0.0    2.5
   19     3.6   9.6   46.0     0.0     0.0     0.0    0.        0.      0.0    6.6
   20     3.7   9.6   40.5     0.0     0.0     0.0    0.        0.      0.0    5.7


   MEAN   3.7   9.5   36.1     0.0     0.0     0.0    0.        0.      0.0    7.3

 STD DEV   .2    .1   15.2     0.0     0.0     0.0    0.        0.      0.0    3.6

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA CEDAR MTN.   DATE 13 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.1	9.7	42.0	0.0	0.0	0.0	0.	0.	0.0	6.2
2	4.0	0.0	8.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	4.2	9.7	36.0	0.0	0.0	0.0	0.	0.	0.0	5.0
4	4.0	0.0	9.0	0.0	0.0	0.0	0.	0.	0.0	0.0
5	3.9	0.0	21.0	0.0	0.0	0.0	0.	0.	0.0	0.0
6	4.1	9.8	24.0	0.0	0.0	0.0	0.	0.	0.0	5.1
7	4.2	9.8	40.0	0.0	0.0	0.0	0.	0.	0.0	7.0
8	4.3	9.8	36.0	0.0	0.0	0.0	0.	0.	0.0	9.5
9	4.2	9.7	44.0	0.0	0.0	0.0	0.	0.	0.0	8.5
10	4.5	9.8	68.0	0.0	0.0	0.0	0.	0.	0.0	9.0
11	4.3	9.7	51.0	0.0	0.0	0.0	0.	0.	0.0	10.5
12	4.0	9.8	14.0	0.0	0.0	0.0	0.	0.	0.0	3.0
13	4.2	9.8	48.0	0.0	0.0	0.0	0.	0.	0.0	5.5
14	4.2	9.7	37.0	0.0	0.0	0.0	0.	0.	0.0	6.5
15	4.2	9.8	25.0	0.0	0.0	0.0	0.	0.	0.0	8.0
16	4.3	9.8	32.0	0.0	0.0	0.0	0.	0.	0.0	8.5
17	4.3	9.7	46.0	0.0	0.0	0.0	0.	0.	0.0	5.5
18	4.2	0.0	29.0	0.0	0.0	0.0	0.	0.	0.0	0.0
19	4.1	9.7	51.0	0.0	0.0	0.0	0.	0.	0.0	7.0
20	4.2	9.7	37.0	0.0	0.0	0.0	0.	0.	0.0	7.5
MEAN	4.2	9.7	34.9	0.0	0.0	0.0	0.	0.	0.0	7.0
STD DEV	.1	.1	15.2	0.0	0.0	0.0	0.	0.	0.0	2.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA CEDAR MTN.            DATE 27  JULY      1981
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH  VEG.  SEED
        VEG.  REPR.                              CLASS   PERCENT TWIG  STALK
                                                                 LNGTH LNGTH
**************************************************************************
     1    4.3   9.7   43.0   0.0    0.0    0.0    0.      0.     2.5   7.3
     2    4.2   0.0   16.0   0.0    0.0    0.0    0.      0.      .5   0.0
     3    4.2   9.6   36.0   0.0    0.0    0.0    0.      0.     1.5   5.0
     4    4.0   0.0   11.0   0.0    0.0    0.0    0.      0.      .5   0.0
     5    4.0   0.0   21.5   0.0    0.0    0.0    0.      0.      .5   0.0
     6    4.3   9.7   29.0   0.0    0.0    0.0    0.      0.     2.0   8.0
     7    4.5   9.8   40.5   0.0    0.0    0.0    0.      0.     3.0   8.0
     8    4.4   9.7   38.0   0.0    0.0    0.0    0.      0.     3.8   9.5
     9    4.3   9.7   41.5   0.0    0.0    0.0    0.      0.     2.3  10.0
    10    4.6   9.7   60.5   0.0    0.0    0.0    0.      0.     3.5  15.0
    11    4.4   9.6   54.5   0.0    0.0    0.0    0.      0.     1.9  13.6
    12    4.1   9.5   14.5   0.0    0.0    0.0    0.      0.      .5   3.9
    13    4.3   9.8   45.0   0.0    0.0    0.0    0.      0.     3.0   6.5
    14    4.4   9.8   37.5   0.0    0.0    0.0    0.      0.     2.8   7.0
    15    4.3   9.7   31.5   0.0    0.0    0.0    0.      0.     3.5   8.8
    16    4.4   9.8   35.5   0.0    0.0    0.0    0.      0.     2.4   9.8
    17    4.2   9.6   46.5   0.0    0.0    0.0    0.      0.     1.5   7.3
    18    4.4   0.0   28.5   0.0    0.0    0.0    0.      0.     3.0   0.0
    19    4.4   9.6   46.0   0.0    0.0    0.0    0.      0.     3.0   0.0
    20    4.2   9.6   45.5   0.0    0.0    0.0    0.      0.      .5  10.4


   MEAN   4.3   9.7   36.1   0.0    0.0    0.0    0.      0.     2.1   8.6

 STD DEV   .2    .1   13.1   0.0    0.0    0.0    0.      0.     1.1   2.8

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA CEDAR MTN.   DATE 10 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.3	0.0	12.5	0.0	0.0	0.0	0.	0.	0.0	0.0
2	4.3	0.0	15.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	4.6	9.7	32.0	0.0	0.0	0.0	0.	0.	0.0	5.0
4	4.7	9.7	35.0	0.0	0.0	0.0	0.	0.	0.0	5.0
5	4.3	0.0	21.0	0.0	0.0	0.0	0.	0.	0.0	0.0
6	4.6	9.6	24.0	0.0	0.0	0.0	0.	0.	0.0	5.5
7	4.7	9.7	43.0	0.0	0.0	0.0	0.	0.	0.0	7.5
8	4.8	9.6	38.0	0.0	0.0	0.0	0.	0.	0.0	6.5
9	4.7	9.7	36.5	0.0	0.0	0.0	0.	0.	0.0	12.0
10	4.7	9.8	61.5	0.0	0.0	0.0	0.	0.	0.0	8.0
11	4.6	9.7	51.0	0.0	0.0	0.0	0.	0.	0.0	10.0
12	4.6	9.5	48.0	0.0	0.0	0.0	0.	0.	0.0	6.0
13	4.6	9.7	44.0	0.0	0.0	0.0	0.	0.	0.0	6.0
14	4.6	9.7	34.0	0.0	0.0	0.0	0.	0.	0.0	5.5
15	4.6	9.7	26.0	0.0	0.0	0.0	0.	0.	0.0	8.0
16	4.6	9.6	31.0	0.0	0.0	0.0	0.	0.	0.0	8.0
17	4.6	9.5	43.0	0.0	0.0	0.0	0.	0.	0.0	7.5
18	4.6	0.0	28.2	0.0	0.0	0.0	0.	0.	0.0	0.0
19	4.6	9.7	43.0	0.0	0.0	0.0	0.	0.	0.0	7.0
20	4.5	9.7	41.0	0.0	0.0	0.0	0.	0.	0.0	7.0
MEAN	4.6	9.7	35.4	0.0	0.0	0.0	0.	0.	0.0	7.2
STD DEV	.1	.1	12.2	0.0	0.0	0.0	0.	0.	0.0	1.9

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA CEDAR MTN.         DATE 25  AUGUST   1981
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
       VEG.  REPR.                               CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
*************************************************************************************
   1     5.0   0.0   13.0    0.0    0.0    0.0   0.        0.     1.5   0.0
   2     5.0   0.0   16.5    0.0    0.0    0.0   0.        0.      .5   0.0
   3     4.6   9.6   35.0    0.0    0.0    0.0   0.        0.     1.0   4.0
   4     5.0   0.0   10.0    0.0    0.0    0.0   0.        0.      .5   0.0
   5     5.0   0.0   19.0    0.0    0.0    0.0   0.        0.      .2   0.0
   6     4.7   9.8   26.0    0.0    0.0    0.0   0.        0.     1.0   5.5
   7     5.0   9.7   35.5    0.0    0.0    0.0   0.        0.      .3   6.5
   8     4.8   9.7   33.3    0.0    0.0    0.0   0.        0.     2.0  10.0
   9     4.7   9.7   43.0    0.0    0.0    0.0   0.        0.     1.5   9.8
  10     4.9   9.9   61.5    0.0    0.0    0.0   0.        0.     2.5  14.0
  11     4.8   9.8   47.8    0.0    0.0    0.0   0.        0.     1.0  12.3
  12     4.9   9.8   45.5    0.0    0.0    0.0   0.        0.     3.0   5.8
  13     4.8   9.9   46.0    0.0    0.0    0.0   0.        0.     1.5   6.0
  14     5.0   9.8   37.5    0.0    0.0    0.0   0.        0.      .3   7.3
  15     4.6   9.8   25.5    0.0    0.0    0.0   0.        0.     1.5   6.0
  16     4.7   9.8   36.0    0.0    0.0    0.0   0.        0.     1.0   8.4
  17     4.6   9.7   45.0    0.0    0.0    0.0   0.        0.      .5   6.5
  18     4.8   0.0   29.5    0.0    0.0    0.0   0.        0.      .5   6.5
  19     4.9   9.8   46.0    0.0    0.0    0.0   0.        0.     1.5   0.0
  20     5.0   9.8   39.0    0.0    0.0    0.0   0.        0.     2.0   7.6
                                                                  .5   7.9


  MEAN   4.9   9.8   34.5    0.0    0.0    0.0   0.        0.     1.2   7.8

STD DEV   .1    .1   13.2    0.0    0.0    0.0   0.        0.      .8   2.7

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA CEDAR MTN.          DATE 13  SEPT      1981
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PLANT PHENCLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
       VEG.  REPR.                               CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
****************************************************************************
  1     5.5  11.0    40.0    0.0    0.0    0.0   0.       0.     3.0   7.5
  2     5.5   0.0    14.6    0.0    0.0    0.0   0.       0.     1.0   0.0
  3     5.5  11.0    33.0    0.0    0.0    0.0   0.       0.     3.0   3.0
  4     5.6   9.5    38.5    0.0    0.0    0.0   0.       0.     1.0   6.0
  5     6.7   0.0    18.5    0.0    0.0    0.0   0.       0.     0.0   0.0
  6     5.5  10.9    29.6    0.0    0.0    0.0   0.       0.     1.5   5.5
  7     5.5   0.0    43.0    0.0    0.0    0.0   0.       0.     1.0   0.0  INSECT DAMAGE TO
  8     5.5   9.8    37.0    0.0    0.0    0.0   0.       0.     1.0  12.0  MANY FLOWERS
  9     5.5   0.0    40.0    0.0    0.0    0.0   0.       0.     2.5  11.0
 10     5.5  11.0    61.0    0.0    0.0    0.0   0.       0.     3.0   0.0
 11     5.5  11.8    56.5    0.0    0.0    0.0   0.       0.     1.5  10.0
 12     5.5  11.0    47.5    0.0    0.0    0.0   0.       0.     1.0   7.0
 13     5.5   0.0    46.5    0.0    0.0    0.0   0.       0.     1.0   7.0
 14     5.5  11.5    37.0    0.0    0.0    0.0   0.       0.     2.0   8.0
 15     5.5   0.0    31.4    0.0    0.0    0.0   0.       0.     2.0   5.5
 16     5.5   0.0    36.5    0.0    0.0    0.0   0.       0.     2.0   7.5
 17     5.5   9.5    43.5    0.0    0.0    0.0   0.       0.     1.0   7.0
 18     5.0   0.0    27.0    0.0    0.0    0.0   0.       0.     3.0   0.0
 19     5.5  11.1    45.0    0.0    0.0    0.0   0.       0.     2.5   7.0
 20     5.5  11.5    40.0    0.0    0.0    0.0   0.       0.     1.5   7.0


  MEAN  5.5  10.8    38.3    0.0    0.0    0.0   0.       0.     1.8   7.4

STD DEV  .3    .8    11.1    0.0    0.0    0.0   0.       0.      .8   2.2

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA CUMBER. 3            DATE 02  MAY       1981
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 PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW     NEW
 NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH    VEG.    SEED
        VEG.  REPR.                                   CLASS   PERCENT   TWIG    STALK
                                                                        LNGTH   LNGTH
**************************************************************************************
   1     3.3   0.0    64.0     0.0     0.0    78.0    4.        5.      0.0     0.0
   2     3.2   0.0    34.0     0.0     0.0    26.0    4.       15.      0.0     0.0
   3     3.2   0.0    35.0    48.0    23.0     0.0    4.        2.      0.0     0.0
   4     3.3   0.0    55.0    78.0    46.0     0.0    4.       40.      0.0     0.0
   5     3.4   0.0    52.0    55.0    24.0     0.0    5.       75.      0.0     0.0
   6     3.3   0.0    40.0     0.0     0.0    23.0    5.       85.      0.0     0.0
   7     3.4   0.0    48.0    46.0    28.0     0.0    4.        3.      0.0     0.0
   8     3.3   0.0    62.0     0.0     0.0    64.0    4.        5.      0.0     0.0
   9     3.4   0.0    29.0    22.0     6.0     0.0    5.       60.      0.0     0.0
  10     3.2   0.0    75.0     0.0     0.0    68.0    4.       35.      0.0     0.0
  11     3.4   0.0    36.0    28.0    15.0     0.0    4.       40.      0.0     0.0
  12     3.3   0.0    33.0     0.0     0.0    28.0    4.       10.      0.0     0.0
  13     3.3   0.0    68.0   128.0    75.0     0.0    4.       10.      0.0     0.0
  14     3.3   0.0    69.0     0.0     0.0    72.0    4.        2.      0.0     0.0
  15     3.5   0.0    58.0    45.0    22.0     0.0    5.       65.      0.0     0.0
  16     3.4   0.0    66.0     0.0     0.0    73.0    4.       15.      0.0     0.0
  17     3.3   0.0    95.0     0.0     0.0    92.0    4.       10.      0.0     0.0
  18     3.2   0.0    44.0    56.0    25.0     0.0    4.       15.      0.0     0.0
  19     3.3   0.0    58.0    54.0    22.0     0.0    4.       35.      0.0     0.0
  20     3.3   0.0    43.0    50.0    13.0     0.0    4.       20.      0.0     0.0


  MEAN   3.3   0.0    53.3    55.5    27.2    58.2    4.       27.      0.0     0.0

STD DEV   .1   0.0    17.1    28.2    18.8    25.6    0.       26.      0.0     0.0


 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA CUMBER. 3          DATE 26  MAY      1961
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PLANT  PHENOLOGICAL    PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW    NEW
NO.    STAGE  SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH    VEG.   SEED
        VEG.  REPR.                                    CLASS   PERCENT   TWIG   STALK
                                                                          LNGTH  LNGTH

*****************************************************************************************
  1     3.2    9.0     50.0    27.0    23.0    0.0    0.        0.       0.0    0.0
  2     3.2    9.0     36.6    36.5    34.7    0.0    0.        0.       0.0    0.0
  3     3.3    9.1     38.6    41.5    38.5    0.0    0.        0.       0.0    0.0
  4     3.3    9.1     53.7    61.0    55.0    0.0    0.        0.       0.0    0.0
  5     3.4    9.0     52.0    60.0    37.0    0.0    0.        0.       0.0    0.0  75% DECADENT
  6     3.1    9.0     48.0    38.8    27.6    0.0    0.        0.       0.0    0.0  80% DECADENT
  7     3.2    9.1     54.0    61.2    44.5    0.0    0.        0.       0.0    0.0
  8     3.2    9.0     55.0    72.0    53.0    0.0    0.        0.       0.0    0.0
  9     3.1    9.0     32.6    27.0    22.0    0.0    0.        0.       0.0    0.0  85% DECADENT
 10     3.1    9.0     77.5    50.0    35.0    0.0    0.        0.       0.0    0.0  50% DECADENT
 11     3.2    9.1     36.0    36.0    22.0    0.0    0.        0.       0.0    0.0  50% DECADENT
 12     3.3    9.0     69.0    30.0    23.5    0.0    0.        0.       0.0    0.0  2 SEGMENTS
 13     3.2    9.0     70.0    94.0    66.0    0.0    0.        0.       0.0    0.0
 14     3.2    9.1     73.0    77.2    68.0    0.0    0.        0.       0.0    0.0
 15     3.2    9.1     64.0    47.0    39.0    0.0    0.        0.       0.0    0.0  2 SEGMENTS
 16     3.2    9.1     68.0    40.0    27.0    0.0    0.        0.       0.0    0.0  50% DECADENT
 17     3.2    9.1    100.4    30.0    22.0    0.0    0.        0.       0.0    0.0
 18     3.1    9.0     50.0    57.0    40.0    0.0    0.        0.       0.0    0.0
 19     3.1    9.0     63.0    42.0    28.0    0.0    0.        0.       0.0    0.0  30% DECADENT
 20     3.2    9.0     42.0    31.0    19.0    0.0    0.        0.       0.0    0.0  2 SEGMENTS


   MEAN  3.2   9.0     56.7    48.0    36.2    0.0    0.        0.       0.0    0.0

STD DEV   .1    .1     16.7    18.4    14.7    0.0    0.        0.       0.0    0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA CUMBER. 3          DATE 05  JUNE      1981
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 PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW    NEW
 NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH   VEG.   SEED
        VEG.  REPR.                                   CLASS   PERCENT  TWIG   STALK
                                                                       LNGTH  LNGTH
*************************************************************************************
   1    3.4    9.0    59.0    32.0    27.0    0.0     4.       15.     0.0    1.0
   2    3.2    9.0    30.0    25.0    28.0    0.0     2.        8.     0.0    2.0
   3    3.3    9.1    37.0    24.0    17.0    0.0     2.        4.     0.0    1.5
   4    3.4    9.2    46.0    68.0    42.0    0.0     4.        0.     0.0    3.0
   5    3.4    9.1    50.0    22.0    35.0    0.0     5.       75.     0.0    2.0
   6    3.4    9.2    49.0    14.0    11.0    0.0     5.       85.     0.0    2.7
   7    3.4    9.2    42.0    56.0    42.0    0.0     4.       15.     0.0    1.5
   8    3.4    9.1    57.0   110.0    45.0    0.0     4.        5.     0.0    1.5
   9    3.4    9.1    24.0    14.0    12.0    0.0     5.       90.     0.0    1.5
  10    3.3    9.1    61.0    70.0    46.0    0.0     5.       70.     0.0    2.5
  11    3.4    9.2    43.0    20.0    14.0    0.0     5.       60.     0.0    2.0
  12    3.4    9.0    53.0    35.0    35.0    0.0     5.       10.     0.0    1.0
  13    3.4    9.2    70.0    99.0    76.0    0.0     4.       10.     0.0    3.0
  14    3.3    9.1    74.0    76.0    62.0    0.0     5.        0.     0.0    2.0
  15    3.3    9.1    58.0    27.0    23.0    0.0     5.       60.     0.0    1.5
  16    3.4    9.1    53.0    34.0    23.0    0.0     4.       30.     0.0    1.5
  17    3.4    9.2    85.0   135.0   107.0    0.0     4.       10.     0.0    2.0
  18    3.4    9.2    47.0    60.0    46.0    0.0     4.        5.     0.0    2.5
  19    3.3    9.1    60.0    43.0    37.0    0.0     5.       30.     0.0    1.5
  20    3.4    9.2     0.0    23.0    13.0    0.0     5.       30.     0.0    3.0


  MEAN  3.4    9.1    52.5    49.4    37.1    0.0     4.       34.     0.0    2.0

 STD DEV .1     .1    14.7    34.4    23.7    0.0     1.       31.     0.0     .6

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA NUMBER. 3              DATE 16  JUNE      1981

PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH  VEG.  SEED
       VEG.  REPR.                               CLASS   PERCENT TWIG  STALK
                                                                 LNGTH LNGTH
***************************************************************************************
  1    3.4   9.1     59.0   0.0    0.0    0.0    0.      0.      0.0   2.0
  2    3.4   9.1     38.5   0.0    0.0    0.0    0.      0.      0.0   2.3
  3    3.4   9.2     34.0   0.0    0.0    0.0    0.      0.      0.0   2.5
  4    3.5   9.3     53.0   0.0    0.0    0.0    0.      0.      0.0   3.4
  5    3.4   9.3     58.0   0.0    0.0    0.0    0.      0.      0.0   3.5
  6    3.5   9.1     40.0   0.0    0.0    0.0    0.      0.      0.0   2.8
  7    3.5   9.2     45.0   0.0    0.0    0.0    0.      0.      0.0   2.0
  8    3.4   9.2     59.5   0.0    0.0    0.0    0.      0.      0.0   2.5
  9    3.4   9.1     24.0   0.0    0.0    0.0    0.      0.      0.0   1.5
 10    3.4   9.1     69.0   0.0    0.0    0.0    0.      0.      0.0   2.0
 11    3.4   9.2     32.0   0.0    0.0    0.0    0.      0.      0.0   1.5
 12    3.4   9.1     53.5   0.0    0.0    0.0    0.      0.      0.0   1.0
 13    3.4   9.2     65.0   0.0    0.0    0.0    0.      0.      0.0   3.0
 14    3.4   9.3     69.0   0.0    0.0    0.0    0.      0.      0.0   3.7
 15    3.4   9.1     53.0   0.0    0.0    0.0    0.      0.      0.0   1.5
 16    3.4   9.2     61.5   0.0    0.0    0.0    0.      0.      0.0   2.5
 17    3.5   9.2     90.0   0.0    0.0    0.0    0.      0.      0.0   3.0
 18    3.4   9.3     50.5   0.0    0.0    0.0    0.      0.      0.0   3.7
 19    3.4   9.1     57.0   0.0    0.0    0.0    0.      0.      0.0   2.0
 20    3.4   9.3     38.5   0.0    0.0    0.0    0.      0.      0.0   3.8


  MEAN 3.4   9.2     52.5   0.0    0.0    0.0    0.      0.      0.0   2.5

STD DEV .0    .1     15.4   0.0    0.0    0.0    0.      0.      0.0    .8

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA CUMBER. 3            DATE 30  JUNE     1981
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
       VEG.  REPR.                               CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
*******************************************************************************
   1    3.6   0.0    46.0    0.0    0.0    0.0    0.       0.     0.0   0.0
   2    3.6   0.0    34.5    0.0    0.0    0.0    0.       0.     0.0   0.0
   3    3.7   9.4    46.5    0.0    0.0    0.0    0.       0.     0.0   2.0
   4    3.7   9.6    54.5    0.0    0.0    0.0    0.       0.     0.0   3.7
   5    3.8   9.5    53.5    0.0    0.0    0.0    0.       0.     0.0   3.3
   6    3.7   9.6    48.0    0.0    0.0    0.0    0.       0.     0.0   3.5
   7    3.7   9.5    45.0    0.0    0.0    0.0    0.       0.     0.0   3.5
   8    4.0   9.5    66.6    0.0    0.0    0.0    0.       0.     0.0   0.0 NEW PLANT
   9    3.8   0.0    23.5    0.0    0.0    0.0    0.       0.     0.0   0.0
  10    3.8   0.0    71.0    0.0    0.0    0.0    0.       0.     0.0   0.0
  11    3.7   9.5    35.5    0.0    0.0    0.0    0.       0.     0.0   2.4
  12    3.8   9.6    37.5    0.0    0.0    0.0    0.       0.     0.0   3.0
  13    3.7   9.6    80.0    0.0    0.0    0.0    0.       0.     0.0   6.6
  14    3.8   9.6    76.0    0.0    0.0    0.0    0.       0.     0.0   5.6
  15    3.7   0.0    59.0    0.0    0.0    0.0    0.       0.     0.0   0.0
  16    3.7   9.5    65.5    0.0    0.0    0.0    0.       0.     0.0   4.2
  17    3.8   9.6    96.0    0.0    0.0    0.0    0.       0.     0.0   6.2
  18    3.7   9.5    52.0    0.0    0.0    0.0    0.       0.     0.0   6.3
  19    3.7   9.5    58.5    0.0    0.0    0.0    0.       0.     0.0   2.0
  20    4.0   9.6    47.0    0.0    0.0    0.0    0.       0.     0.0   6.5


  MEAN  3.8   9.5    54.8    0.0    0.0    0.0    0.       0.     0.0   4.2

STD DEV  .1    .1    17.4    0.0    0.0    0.0    0.       0.     0.0   1.7

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA STUDY AREA NUMBER. 3 DATE 14 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.2	0.0	57.0	0.0	0.0	0.0	0.	0.	0.0	0.0
2	4.4	0.0	36.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	4.4	0.0	37.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	4.4	9.0	40.0	0.0	0.0	0.0	0.	0.	0.0	4.0
5	4.4	9.2	54.0	0.0	0.0	0.0	0.	0.	0.0	5.5
6	4.3	0.0	40.0	0.0	0.0	0.0	0.	0.	0.0	0.0
7	4.1	9.2	42.0	0.0	0.0	0.0	0.	0.	0.0	2.5
8	4.4	0.0	61.0	0.0	0.0	0.0	0.	0.	0.0	0.0
9	4.0	0.0	23.0	0.0	0.0	0.0	0.	0.	0.0	0.0
10	4.3	0.0	50.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	4.3	0.0	34.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	4.3	0.0	47.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	4.2	9.8	80.0	0.0	0.0	0.0	0.	0.	0.0	6.0
14	4.4	9.8	64.0	0.0	0.0	0.0	0.	0.	0.0	5.0
15	4.4	0.0	56.0	0.0	0.0	0.0	0.	0.	0.0	0.0
16	4.4	9.6	61.0	0.0	0.0	0.0	0.	0.	0.0	4.7
17	4.4	9.6	88.0	0.0	0.0	0.0	0.	0.	0.0	6.0
18	4.3	9.6	52.0	0.0	0.0	0.0	0.	0.	0.0	6.5
19	4.4	0.0	47.0	0.0	0.0	0.0	0.	0.	0.0	0.0
20	4.4	0.0	64.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	4.3	9.5	51.7	0.0	0.0	0.0	0.	0.	0.0	5.0
STD DEV	.1	.3	15.7	0.0	0.0	0.0	0.	0.	0.0	1.3

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMESIA TRIDENTATA   STUDY AREA NUMBER. 3   DATE 28 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.3	0.0	46.5	0.0	0.0	0.0	0.	0.	2.0	0.0
2	4.3	0.0	35.5	0.0	0.0	0.0	0.	0.	.6	0.0
3	4.4	0.0	38.0	0.0	0.0	0.0	0.	0.	1.5	0.0
4	4.5	9.4	56.0	0.0	0.0	0.0	0.	0.	2.8	3.2
5	4.3	9.5	44.0	0.0	0.0	0.0	0.	0.	1.5	5.0
6	4.4	0.0	44.5	0.0	0.0	0.0	0.	0.	2.5	0.0
7	4.3	9.5	45.5	0.0	0.0	0.0	0.	0.	1.0	3.8
8	4.3	0.0	66.0	0.0	0.0	0.0	0.	0.	2.8	0.0
9	3.9	0.0	29.0	0.0	0.0	0.0	0.	0.	0.0	0.0
10	4.4	0.0	74.0	0.0	0.0	0.0	0.	0.	1.7	0.0
11	4.3	0.0	32.5	0.0	0.0	0.0	0.	0.	1.3	0.0
12	4.4	9.3	34.0	0.0	0.0	0.0	0.	0.	1.2	2.5
13	4.2	9.6	87.0	0.0	0.0	0.0	0.	0.	.2	8.0
14	4.4	9.7	69.5	0.0	0.0	0.0	0.	0.	2.3	7.0
15	4.3	9.6	60.0	0.0	0.0	0.0	0.	0.	1.5	6.6
16	4.3	9.6	65.5	0.0	0.0	0.0	0.	0.	1.8	5.0
17	4.5	9.5	91.0	0.0	0.0	0.0	0.	0.	3.0	5.5
18	4.3	9.5	51.5	0.0	0.0	0.0	0.	0.	1.0	6.5
19	4.3	9.4	59.0	0.0	0.0	0.0	0.	0.	1.2	1.9
20	4.5	9.4	41.5	0.0	0.0	0.0	0.	0.	3.0	3.3
MEAN	4.3	9.5	53.5	0.0	0.0	0.0	0.	0.	1.7	4.9
STD DEV	.1	.1	17.8	0.0	0.0	0.0	0.	0.	.8	1.9

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMESIA TRIDENTATA   STUDY AREA NUMBER. 3          DATE 11  AUGUST   1981
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                                                                      NEW     NEW
PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD      VEG.    SEED
NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH    TWIG    STALK
       VEG.  REPR.                               CLASS   PERCENT   LNGTH   LNGTH
*****************************************************************************
  1    4.6   9.5    74.0    0.0    0.0    0.0    4.       1.        .5     0.0
  2    4.4   9.4    36.5    0.0    0.0    0.0    3.       5.        .3     0.0
  3    4.3   9.4    36.0    0.0    0.0    0.0    3.      10.        .4     0.0
  4    4.4   9.4    59.8    0.0    0.0    0.0    4.      20.        .5     0.0
  5    4.3   9.4    52.0    0.0    0.0    0.0    4.      60.        .3     0.0 DECADENT
  6    4.2   9.4    44.6    0.0    0.0    0.0    4.      75.        .4     0.0 DECADENT
  7    4.3   9.6    44.4    0.0    0.0    0.0    4.      12.        .5     0.0
  8    4.6   9.6    64.7    0.0    0.0    0.0    4.       5.        .6     0.0
  9    4.3   9.4    28.6    0.0    0.0    0.0    4.      55.        .3     0.0 DECADENT
 10    4.4   9.5    70.6    0.0    0.0    0.0    4.      60.        .5     0.0
 11    4.3   9.4    33.7    0.0    0.0    0.0    4.      70.        .3     0.0 DECADENT
 12    4.4   9.5    65.7    0.0    0.0    0.0    4.      20.        .4     0.0
 13    4.6   9.7    70.4    0.0    0.0    0.0    4.       5.        .5     0.0
 14    4.5   9.7    67.0    0.0    0.0    0.0    4.      10.        .5     0.0
 15    4.5   9.7    63.7    0.0    0.0    0.0    4.      15.        .5     0.0
 16    4.6   9.6    99.2    0.0    0.0    0.0    4.       3.        .6     0.0
 17    4.6   9.7    49.6    0.0    0.0    0.0    4.      18.        .5     0.0
 18    4.5   9.4    53.7    0.0    0.0    0.0    4.      45.        .5     0.0 DECADENT
 19    4.4   9.4    60.2    0.0    0.0    0.0    4.      50.        .4     0.0 DECADENT
 20    4.5   9.4    44.2    0.0    0.0    0.0    4.      60.        .3     0.0 DECADENT


   MEAN 4.4  9.5    55.9    0.0    0.0    0.0    4.      30.        .4     0.0

STD DEV  .1   .1    17.0    0.0    0.0    0.0    0.      26.        .1     0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA NUMBER. 3            DATE 25  AUGUST   1981
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 PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT    DEAD     NEW   NEW
 NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH    VEG.  SEED
       VEG.  REPR.                                CLASS   PERCENT   TWIG  STALK
                                                                    LNGTH LNGTH
*****************************************************************************
   1    4.4   0.0     50.0    0.0    0.0    0.0    0.       0.       .2   0.0
   2    4.7   0.0     37.0    0.0    0.0    0.0    0.       0.       .9   0.0
   3    4.8   0.0     37.5    0.0    0.0    0.0    0.       0.      1.0   0.0
   4    5.0   0.0     56.5    0.0    0.0    0.0    0.       0.      2.5   0.0
   5    4.8   0.0     54.0    0.0    0.0    0.0    0.       0.      1.0   0.0
   6    5.0   0.0     42.5    0.0    0.0    0.0    0.       0.      3.0   0.0
   7    4.8   0.0     46.0    0.0    0.0    0.0    0.       0.      2.0   0.0
   8    4.8   0.0     60.0    0.0    0.0    0.0    0.       0.      2.0   0.0
   9    4.7   0.0     23.0    0.0    0.0    0.0    0.       0.      1.0   0.0
  10    5.0   0.0     73.0    0.0    0.0    0.0    0.       0.      5.0   0.0
  11    4.9   0.0     32.5    0.0    0.0    0.0    0.       0.      5.0   0.0
  12    5.0   0.0     58.5    0.0    0.0    0.0    0.       0.      8.0   0.0
  13    5.0   9.9     77.0    0.0    0.0    0.0    0.       0.      4.0   5.0
  14    4.9   9.9     66.0    0.0    0.0    0.0    0.       0.      3.0   4.0
  15    4.9   9.8     66.0    0.0    0.0    0.0    0.       0.      2.5   5.0
  16    5.0   9.9     64.0    0.0    0.0    0.0    0.       0.      6.0   5.0
  17    4.9   9.9     85.0    0.0    0.0    0.0    0.       0.      5.0   5.0
  18    5.0   0.0     53.0    0.0    0.0    0.0    0.       0.     10.0   0.0
  19    5.0   0.0     59.0    0.0    0.0    0.0    0.       0.      5.5   0.0
  20    5.0   0.0     36.5    0.0    0.0    0.0    0.       0.      5.0   0.0


   MEAN 4.9   9.9     53.9    0.0    0.0    0.0    0.       0.      3.6   4.8

 STD DEV .2    .0     15.9    0.0    0.0    0.0    0.       0.      2.6    .4

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA STUDY AREA CUMBER. 3 DATE 12 SEPT 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH	
1	4.9	9.8	69.0	0.0	0.0	0.0	0.	0.	1.5	6.0	
2	4.9	0.0	35.5	0.0	0.0	0.0	0.	0.	1.5	0.0	
3	4.9	0.0	36.0	0.0	0.0	0.0	0.	0.	1.5	0.0	
4	4.9	0.0	51.0	0.0	0.0	0.0	0.	0.	3.0	0.0	
5	4.9	0.0	47.0	0.0	0.0	0.0	0.	0.	1.0	0.0	
6	4.9	0.0	42.0	0.0	0.0	0.0	0.	0.	2.0	0.0	
7	4.9	0.0	45.5	0.0	0.0	0.0	0.	0.	1.5	0.0	
8	4.9	0.0	61.0	0.0	0.0	0.0	0.	0.	2.0	0.0	
9	5.0	0.0	31.5	0.0	0.0	0.0	0.	0.	.5	0.0	
10	4.9	0.0	73.0	0.0	0.0	0.0	0.	0.	2.0	0.0	
11	4.9	0.0	32.5	0.0	0.0	0.0	0.	0.	1.0	0.0	
12	4.9	9.8	62.5	0.0	0.0	0.0	0.	0.	2.8	1.0	
13	4.9	11.5	79.5	0.0	0.0	0.0	0.	0.	1.0	7.0	INSECT DAMAGE
14	4.9	10.8	66.5	0.0	0.0	0.0	0.	0.	3.0	6.0	VARIED REPRO STAGES
15	4.9	10.5	63.5	0.0	0.0	0.0	0.	0.	1.0	4.5	
16	4.9	10.6	66.0	0.0	0.0	0.0	0.	0.	1.5	4.0	
17	4.9	0.0	92.0	0.0	0.0	0.0	0.	0.	2.0	0.0	
18	4.9	10.9	48.0	0.0	0.0	0.0	0.	0.	1.5	6.0	
19	4.9	0.0	56.0	0.0	0.0	0.0	0.	0.	1.0	0.0	
20	4.9	0.0	37.5	0.0	0.0	0.0	0.	0.	3.0	0.0	
MEAN	4.9	10.6	54.8	0.0	0.0	0.0	0.	0.	1.7	4.9	
STD DEV	.0	.6	16.9	0.0	0.0	0.0	0.	0.	.8	2.0	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMESIA TRIDENTATA    STUDY AREA DEMER                   DATE  2  MAY        1981
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 PLANT PHENOLOGICAL  PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW    NEW
 NO.    STAGE SCORE  HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH   VEG.   SEED
         VEG.  REPR.                                 CLASS   PERCENT  TWIG   STALK
                                                                      LNGTH  LNGTH
*****************************************************************************************
   1     3.1    0.0   0.0     0.0     0.0     0.0    0.       0.      0.0    0.0
   2     3.1    0.0   0.0     0.0     0.0     0.0    0.       0.      0.0    0.0
   3     3.0    0.0   0.0     0.0     0.0     0.0    0.       0.      0.0    0.0
   4     3.1    0.0   0.0     0.0     0.0     0.0    0.       0.      0.0    0.0
   5     3.0    0.0   0.0     0.0     0.0     0.0    0.       0.      0.0    0.0
   6     3.1    0.0   0.0     0.0     0.0     0.0    0.       0.      0.0    0.0
   7     3.0    0.0   0.0     0.0     0.0     0.0    0.       0.      0.0    0.0
   8     3.2    0.0   0.0     0.0     0.0     0.0    0.       0.      0.0    0.0
   9     3.1    0.0   0.0     0.0     0.0     0.0    0.       0.      0.0    0.0
  10     3.1    0.0   0.0     0.0     0.0     0.0    0.       0.      0.0    0.0
  11     2.9    0.0   0.0     0.0     0.0     0.0    0.       0.      0.0    0.0
  12     3.1    0.0   0.0     0.0     0.0     0.0    0.       0.      0.0    0.0
  13     3.1    0.0   0.0     0.0     0.0     0.0    0.       0.      0.0    0.0
  14     3.0    0.0   0.0     0.0     0.0     0.0    0.       0.      0.0    0.0
  15     3.2    0.0   0.0     0.0     0.0     0.0    0.       0.      0.0    0.0
  16     3.2    0.0   0.0     0.0     0.0     0.0    0.       0.      0.0    0.0
  17     3.1    0.0   0.0     0.0     0.0     0.0    0.       0.      0.0    0.0
  18     3.1    0.0   0.0     0.0     0.0     0.0    0.       0.      0.0    0.0
  19     3.1    0.0   0.0     0.0     0.0     0.0    0.       0.      0.0    0.0
  20     3.1    0.0   0.0     0.0     0.0     0.0    0.       0.      0.0    0.0


  MEAN   3.1    0.0   0.0     0.0     0.0     0.0    0.       0.      0.0    0.0

STD DEV   .1    0.0   0.0     0.0     0.0     0.0    0.       0.      0.0    0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA DEMER              DATE 20  MAY       1981
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PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
       VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                LNGTH LNGTH
********************************************************************************
  1     3.3   9.1   31.0   38.0   22.0   0.0    0.      0.      0.0   0.0
  2     3.2   9.1   27.0   71.0   50.0   0.0    0.      0.      0.0   0.0
  3     3.2   9.0   18.0   22.0   12.0   0.0    0.      0.      0.0   0.0
  4     3.3   9.1   15.0   41.0   25.0   0.0    0.      0.      0.0   0.0
  5     3.2   9.0   24.0   52.0   22.0   0.0    0.      0.      0.0   0.0
  6     3.3   9.0   20.0   50.0   13.0   0.0    0.      0.      0.0   0.0
  7     3.2   0.0   10.0   15.0   10.0   0.0    0.      0.      0.0   0.0
  8     3.3   0.0   24.0   50.0   29.0   0.0    0.      0.      0.0   0.0
  9     3.2   9.1   31.0   50.0   28.0   0.0    0.      0.      0.0   0.0
 10     3.2   9.0   41.0   70.0   63.0   0.0    0.      0.      0.0   0.0
 11     3.2   9.0   48.0   64.0   55.0   0.0    0.      0.      0.0   0.0
 12     3.3   0.0   25.0   75.0   43.0   0.0    0.      0.      0.0   0.0
 13     3.2   9.0   23.0   20.0   10.0   0.0    0.     75.      0.0   0.0 DECADENT
 14     3.1   9.0   37.0   30.0   14.0   0.0    0.      0.      0.0   0.0
 15     3.3   9.0   50.0   38.0   31.0   0.0    0.     50.      0.0   0.0 DECADENT
 16     3.2   9.0   24.0   18.0   10.0   0.0    0.      0.      0.0   0.0
 17     3.3   0.0   19.0   44.0   23.0   0.0    0.      0.      0.0   0.0
 18     3.2   9.0   28.0   62.0   55.0   0.0    0.      0.      0.0   0.0
 19     3.1   0.0   17.0   22.0   10.0   0.0    0.      0.      0.0   0.0
 20     3.2   9.0   20.0   44.0   24.0   0.0    0.      0.      0.0   0.0


  MEAN  3.2   9.0   26.6   43.8   27.5   0.0    0.     63.      0.0   0.0

STD DEV  .1    .0   10.6   18.6   17.0   0.0    0.     18.      0.0   0.0


 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA STUDY AREA DEMER DATE 02 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.3	9.2	31.4	0.0	0.0	0.0	0.	0.	0.0	0.0
2	3.3	9.2	33.1	0.0	0.0	0.0	0.	0.	0.0	0.0
3	3.2	9.0	19.4	0.0	0.0	0.0	0.	0.	0.0	0.0
4	3.3	9.1	16.8	0.0	0.0	0.0	0.	0.	0.0	0.0
5	3.2	9.0	24.7	0.0	0.0	0.0	0.	0.	0.0	0.0
6	3.4	9.1	27.7	0.0	0.0	0.0	0.	0.	0.0	0.0
7	3.2	0.0	14.2	0.0	0.0	0.0	0.	0.	0.0	0.0
8	3.3	9.0	25.3	0.0	0.0	0.0	0.	0.	0.0	0.0
9	3.2	9.1	38.0	0.0	0.0	0.0	0.	0.	0.0	0.0
10	3.2	9.0	41.5	0.0	0.0	0.0	0.	0.	0.0	0.0
11	3.3	9.1	48.3	0.0	0.0	0.0	0.	0.	0.0	0.0
12	3.3	9.0	28.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	3.2	9.0	28.9	0.0	0.0	0.0	0.	0.	0.0	0.0
14	3.2	9.0	40.5	0.0	0.0	0.0	0.	0.	0.0	0.0
15	3.3	9.1	50.4	0.0	0.0	0.0	0.	0.	0.0	0.0
16	3.2	9.0	24.1	0.0	0.0	0.0	0.	0.	0.0	0.0
17	3.3	9.0	20.8	0.0	0.0	0.0	0.	0.	0.0	0.0
18	3.3	9.0	30.6	0.0	0.0	0.0	0.	0.	0.0	0.0
19	3.1	0.0	17.8	0.0	0.0	0.0	0.	0.	0.0	0.0
20	3.2	9.0	27.9	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	3.3	9.1	29.5	0.0	0.0	0.0	0.	0.	0.0	0.0
STD DEV	.1	.1	10.1	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMESIA TRIDENTATA   STUDY AREA DEMER                 DATE 17  JUNE     1981
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PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH  VEG.  SEED
       VEG.  REPR.                               CLASS   PERCENT TWIG  STALK
                                                                 LNGTH LNGTH
*****************************************************************************
  1     3.6   9.5    30.2   0.0    0.0    0.0    0.       0.     0.0   8.0
  2     3.7   9.6    39.5   0.0    0.0    0.0    4.      20.     0.0   8.5
  3     3.6   9.3    17.5   0.0    0.0    0.0    4.      20.     0.0   0.0
  4     3.7   9.4    20.0   0.0    0.0    0.0    4.      10.     0.0   8.3
  5     3.7   9.4    28.0   0.0    0.0    0.0    4.      20.     0.0   4.0
  6     3.8   9.5    25.5   0.0    0.0    0.0    4.      20.     0.0   6.0
  7     3.8   9.2    11.0   0.0    0.0    0.0    5.      15.     0.0   0.0
  8     3.8   9.5    26.0   0.0    0.0    0.0    4.      10.     0.0   4.0
  9     3.9   9.6    40.0   0.0    0.0    0.0    4.       5.     0.0  10.5
 10     3.8   9.5    45.5   0.0    0.0    0.0    4.       2.     0.0   6.7
 11     3.7   9.5    50.5   0.0    0.0    0.0    4.      15.     0.0   7.5
 12     3.8   9.4    29.0   0.0    0.0    0.0    4.       5.     0.0   2.5
 13     3.8   9.5    26.0   0.0    0.0    0.0    5.      90.     0.0   6.2
 14     3.9   9.5    40.0   0.0    0.0    0.0    4.      10.     0.0   4.9
 15     4.0   9.5    55.7   0.0    0.0    0.0    4.       5.     0.0   5.5
 16     3.6   9.3    24.5   0.0    0.0    0.0    5.      40.     0.0   0.0
 17     3.8   9.4    23.4   0.0    0.0    0.0    4.       3.     0.0   3.6
 18     3.7   9.5    32.0   0.0    0.0    0.0    4.      20.     0.0   5.6
 19     3.8   9.5    20.0   0.0    0.0    0.0    5.      20.     0.0   4.0
 20     3.8   9.5    28.5   0.0    0.0    0.0    4.      15.     0.0   6.0


  MEAN  3.8   9.5    30.6   0.0    0.0    0.0    4.      18.     0.0   6.0

STD DEV  .1    .1    11.4   0.0    0.0    0.0    0.      20.     0.0   2.1

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA DEMER                 DATE 29  JUNE     1981
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 PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD      NEW   NEW
 NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH     VEG.  SEED
       VEG.  REPR.                                CLASS  PERCENT    TWIG  STALK
                                                                    LNGTH LNGTH
***************************************************************************************
    1      4.3   9.5    31.0    0.0    0.0    0.0   0.        0.        0.0  12.0
    2      4.5   9.5    37.0    0.0    0.0    0.0   0.        0.        0.0   8.0
    3      4.2   9.0    14.0    0.0    0.0    0.0   0.        0.        0.0   0.0
    4      4.1   9.5    21.0    0.0    0.0    0.0   0.        0.        0.0  10.0
    5      4.1   9.5    24.0    0.0    0.0    0.0   0.        0.        0.0   5.0
    6      4.5   9.5    30.0    0.0    0.0    0.0   0.        0.        0.0   6.0
    7      4.5   0.0    10.0    0.0    0.0    0.0   0.        0.        0.0   0.0
    8      4.2   9.5    25.0    0.0    0.0    0.0   0.        0.        0.0   5.0
    9      4.1   9.5    35.0    0.0    0.0    0.0   0.        0.        0.0  11.0
   10      4.1   9.5    51.0    0.0    0.0    0.0   0.        0.        0.0   6.0
   11      4.4   9.5    53.0    0.0    0.0    0.0   0.        0.        0.0   8.0
   12      4.3   9.5    28.0    0.0    0.0    0.0   0.        0.        0.0   6.0
   13      4.1   9.5    24.0    0.0    0.0    0.0   0.        0.        0.0   7.0
   14      4.5   9.5    46.0    0.0    0.0    0.0   0.        0.        0.0  10.0
   15      4.3   9.5    59.0    0.0    0.0    0.0   0.        0.        0.0  10.0
   16      4.5   0.0    22.0    0.0    0.0    0.0   0.        0.        0.0   0.0
   17      4.5   0.0    19.0    0.0    0.0    0.0   0.        0.        0.0   0.0
   18      4.3   9.5    31.0    0.0    0.0    0.0   0.        0.        0.0  10.0
   19      4.3   9.5    21.0    0.0    0.0    0.0   0.        0.        0.0   6.0
   20      4.2   9.5    30.0    0.0    0.0    0.0   0.        0.        0.0   8.0


    MEAN   4.3   9.5    30.6    0.0    0.0    0.0   0.        0.        0.0   8.0

 STD DEV    .2    .1    13.1    0.0    0.0    0.0   0.        0.        0.0   2.3


 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA DEMER                DATE 14  JULY    1981
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PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT    DEAD    NEW   NEW
NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH   VEG.  SEED
       VEG.  REPR.                              CLASS   PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
*****************************************************************************
  1    4.4   9.5    32.7    0.0    0.0    0.0   3.        5.     2.2  14.5
  2    4.4   9.5    42.0    0.0    0.0    0.0   4.        2.     3.0  10.3
  3    4.4   9.0    15.8    0.0    0.0    0.0   4.       30.     1.9   0.0 PLANT DECADENT
  4    4.5   9.5    24.7    0.0    0.0    0.0   4.       25.     1.4   9.5 PLANT DECADENT
  5    4.5   9.4    25.7    0.0    0.0    0.0   4.       18.      .9   6.0 PLANT DECADENT
  6    4.4   9.5    26.0    0.0    0.0    0.0   4.       20.     2.3   9.5 PLANT DECADENT
  7    4.4   9.4    13.0    0.0    0.0    0.0   5.       70.      .8   2.3 PLANT DECADENT
  8    4.4   9.5    29.4    0.0    0.0    0.0   4.       10.      .7   7.1
  9    4.4   9.5    35.0    0.0    0.0    0.0   4.        5.     1.2   8.7
 10    4.4   9.5    51.0    0.0    0.0    0.0   4.        2.      .9   8.2
 11    4.4   9.5    49.2    0.0    0.0    0.0   4.        3.      .8   9.7
 12    4.4   9.4    30.0    0.0    0.0    0.0   3.        7.      .5   6.0
 13    4.4   9.5    30.8    0.0    0.0    0.0   5.       75.     1.0  13.0 PLANT DECADENT
 14    4.4   9.5    48.8    0.0    0.0    0.0   4.       10.      .9   7.5
 15    4.4   9.5    57.8    0.0    0.0    0.0   4.       20.     1.1   9.4 PLANT DECADENT
 16    4.5   9.5    26.7    0.0    0.0    0.0   5.       50.      .4   9.0 PLANT DECADENT
 17    4.4   9.5    19.4    0.0    0.0    0.0   3.       10.      .4   5.9
 18    4.4   9.5    36.5    0.0    0.0    0.0   4.        4.      .8   9.7
 19    4.5   9.5    20.0    0.0    0.0    0.0   4.       30.      .4   7.9 PLANT DECADENT
 20    4.6   9.5    32.0    0.0    0.0    0.0   4.       15.      .6  10.2


  MEAN 4.4   9.5    32.3    0.0    0.0    0.0   4.       21.     1.1   8.7

STD DEV .1    .1    12.2    0.0    0.0    0.0   1.       22.      .7   2.7

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA    STUDY AREA DEMER               DATE 28  JULY     1981
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH  VEG.  SEED
       VEG.  REPR.                               CLASS   PERCENT TWIG  STALK
                                                                 LNGTH LNGTH
*****************************************************************************
   1    4.6   9.7    37.5   0.0    0.0    0.0    3.       3.     .6   0.0
   2    4.6   9.7    42.4   0.0    0.0    0.0    3.       2.     .5   0.0
   3    4.1   9.2    17.4   0.0    0.0    0.0    3.      30.     .3   0.0
   4    4.2   9.5    23.8   0.0    0.0    0.0    4.      35.     .5   0.0
   5    4.1   9.4    24.6   0.0    0.0    0.0    4.      30.     .6   0.0
   6    4.5   9.3    27.1   0.0    0.0    0.0    3.      15.     .7   0.0
   7    4.0   9.1    12.8   0.0    0.0    0.0    4.      70.     .3   0.0 DECADENT
   8    4.3   9.4    26.0   0.0    0.0    0.0    4.      10.     .4   0.0
   9    4.6   9.6    40.5   0.0    0.0    0.0    4.       5.     .6   0.0
  10    4.6   9.6    46.5   0.0    0.0    0.0    4.       4.     .8   0.0
  11    4.6   9.6    55.2   0.0    0.0    0.0    4.       7.     .9   0.0
  12    4.5   9.4    29.8   0.0    0.0    0.0    4.       2.     .5   0.0
  13    4.4   9.5    32.2   0.0    0.0    0.0    4.      80.     .3   0.0
  14    4.5   9.6    44.7   0.0    0.0    0.0    4.      17.     .5   0.0
  15    4.5   9.5    62.8   0.0    0.0    0.0    4.      20.     .4   0.0 DECADENT
  16    4.3   9.5    23.4   0.0    0.0    0.0    4.      50.     .3   0.0 DECADENT
  17    4.2   9.4    23.7   0.0    0.0    0.0    3.       7.     .5   0.0
  18    4.6   9.4    34.0   0.0    0.0    0.0    3.       6.     .8   0.0
  19    4.5   9.4    23.0   0.0    0.0    0.0    3.      18.     .5   0.0
  20    4.3   9.5    31.3   0.0    0.0    0.0    4.      22.     .6   0.0


   MEAN 4.4   9.5    32.9   0.0    0.0    0.0    4.      22.     .5   0.0

STD DEV  .2    .2    12.7   0.0    0.0    0.0    0.      22.     .2   0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA DEMER                  DATE 11  AUGUST   1981
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                                                                      NEW    NEW
PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD   VEG.   SEED
NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH  TWIG   STALK
      VEG.  REPR.                               CLASS  PERCENT LNGTH  LNGTH
*******************************************************************************
  1   4.4   9.6    31.5   0.0    0.0    0.0    0.      0.     1.5   14.0
  2   4.4   9.7    39.5   0.0    0.0    0.0    0.      0.     1.5   11.0
  3   4.3   0.0    17.0   0.0    0.0    0.0    0.      0.      .5    0.0
  4   4.3   9.6    25.0   0.0    0.0    0.0    0.      0.      .5    9.5
  5   4.2   9.5    26.5   0.0    0.0    0.0    0.      0.     0.0    5.0
  6   4.4   9.5    22.0   0.0    0.0    0.0    0.      0.     1.5    4.0
  7   4.4   0.0     8.5   0.0    0.0    0.0    0.      0.     1.5    0.0
  8   4.4   9.3    28.5   0.0    0.0    0.0    0.      0.     1.0    7.0
  9   4.4   9.6    35.0   0.0    0.0    0.0    0.      0.     1.5    9.5
 10   4.3   9.5    50.0   0.0    0.0    0.0    0.      0.      .5    8.5
 11   4.4   9.6    50.0   0.0    0.0    0.0    0.      0.     1.0    8.0
 12   4.2   9.5    27.0   0.0    0.0    0.0    0.      0.     0.0    5.0
 13   4.2   9.5    25.0   0.0    0.0    0.0    0.      0.     0.0    7.5
 14   4.4   9.5    42.5   0.0    0.0    0.0    0.      0.     1.0    9.5
 15   4.4   9.5    61.0   0.0    0.0    0.0    0.      0.     1.0    8.3
 16   4.4   9.5    22.5   0.0    0.0    0.0    0.      0.     1.3    8.7
 17   4.5   9.5    19.5   0.0    0.0    0.0    0.      0.     2.5    5.8
 18   4.4   9.5    37.2   0.0    0.0    0.0    0.      0.     1.0    9.3
 19   4.4   9.5    20.5   0.0    0.0    0.0    0.      0.     1.0    5.0
 20   4.3   9.6    28.5   0.0    0.0    0.0    0.      0.      .5    9.6

   MEAN  4.4   9.5    30.9   0.0    0.0    0.0    0.      0.     1.1    8.1

STD DEV   .1    .1    12.8   0.0    0.0    0.0    0.      0.      .5    2.5

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA DEMER                    DATE 25  AUGUST   1981
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 PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW    NEW
 NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH   VEG.   SEED
        VEG.  REPR.                                   CLASS   PERCENT  TWIG   STALK
                                                                       LNGTH  LNGTH
*********************************************************************************************
   1     4.6   9.6    33.8     0.0     0.0     0.0     0.       0.     0.0   11.7
   2     4.6   9.7    43.7     0.0     0.0     0.0     0.       0.     0.0    8.9
   3     4.4   9.4    17.0     0.0     0.0     0.0     0.       0.     0.0    5.0
   4     4.6   9.6    23.0     0.0     0.0     0.0     0.       0.     0.0    7.0
   5     4.4   9.5    25.6     0.0     0.0     0.0     0.       0.     0.0    4.3
   6     4.6   9.6    30.3     0.0     0.0     0.0     0.       0.     0.0   10.1
   7     4.2   9.4    11.9     0.0     0.0     0.0     0.       0.     0.0    3.0
   8     4.5   9.5    26.2     0.0     0.0     0.0     0.       0.     0.0    7.6
   9     4.6   9.6    39.2     0.0     0.0     0.0     0.       0.     0.0   10.8
  10     4.6   9.5    51.0     0.0     0.0     0.0     0.       0.     0.0    8.0
  11     4.6   9.7    56.5     0.0     0.0     0.0     0.       0.     0.0   13.0
  12     4.5   9.5    33.3     0.0     0.0     0.0     0.       0.     0.0    3.0
  13     4.3   9.4    17.1     0.0     0.0     0.0     0.       0.     0.0    3.0
  14     4.6   9.6    52.0     0.0     0.0     0.0     0.       0.     0.0   12.0
  15     4.6   9.6    60.0     0.0     0.0     0.0     0.       0.     0.0    9.2
  16     4.4   9.5    24.0     0.0     0.0     0.0     0.       0.     0.0   10.0
  17     4.4   9.4    21.0     0.0     0.0     0.0     0.       0.     0.0    4.0
  18     4.6   9.5    34.0     0.0     0.0     0.0     0.       0.     0.0   12.0
  19     4.4   9.5    19.0     0.0     0.0     0.0     0.       0.     0.0    5.9
  20     4.4   9.7    29.0     0.0     0.0     0.0     0.       0.     0.0    9.8

   MEAN  4.5   9.5    32.4     0.0     0.0     0.0     0.       0.     0.0    7.9

STD DEV   .1    .1    14.0     0.0     0.0     0.0     0.       0.     0.0    3.3

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA DEMER                    DATE 12  SEPT     1981
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PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD    NEW    NEW
NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH  VEG.   SEED
       VEG.  REPR.                                   CLASS   PERCENT TWIG   STALK
                                                                     LNGTH  LNGTH
**********************************************************************************
  1     5.0  11.4    33.3     0.0     0.0     0.0     0.       0.     1.4    5.0
  2     5.0  10.9    40.5     0.0     0.0     0.0     0.       0.     1.2   11.0
  3     5.1   0.0    15.0     0.0     0.0     0.0     0.       0.     1.4    0.0
  4     5.0  11.0    22.0     0.0     0.0     0.0     0.       0.      .6   10.0
  5     5.1   0.0    24.6     0.0     0.0     0.0     0.       0.      .4    0.0
  6     5.2  10.4    25.0     0.0     0.0     0.0     0.       0.     1.6    3.4
  7     5.1   0.0     7.0     0.0     0.0     0.0     0.       0.     1.4    0.0
  8     5.1  10.6    26.5     0.0     0.0     0.0     0.       0.     1.2    7.0
  9     5.2  11.1    36.8     0.0     0.0     0.0     0.       0.     1.7    9.8
 10     5.0  10.5    46.0     0.0     0.0     0.0     0.       0.     1.1    6.0
 11     5.1  10.7    52.0     0.0     0.0     0.0     0.       0.      .7    6.5
 12     5.1  10.4    28.0     0.0     0.0     0.0     0.       0.     1.5    5.5
 13     5.1  10.3    23.0     0.0     0.0     0.0     0.       0.     1.7    7.5
 14     5.1  10.3    44.0     0.0     0.0     0.0     0.       0.      .3    6.8
 15     5.0  10.2    63.0     0.0     0.0     0.0     0.       0.      .6    6.6
 16     5.0  10.4    21.0     0.0     0.0     0.0     0.       0.      .7    9.0
 17     5.1   0.0    22.0     0.0     0.0     0.0     0.       0.      .9    0.0
 18     5.1  10.2    35.0     0.0     0.0     0.0     0.       0.      .4    7.0
 19     5.2  10.8    47.0     0.0     0.0     0.0     0.       0.     1.3    8.5
 20     5.1  10.5    30.4     0.0     0.0     0.0     0.       0.     1.0    7.8

  MEAN  5.1  10.6    32.1     0.0     0.0     0.0     0.       0.     1.1    7.3

STD DEV  .1    .3    13.6     0.0     0.0     0.0     0.       0.      .5    2.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA STUDY AREA FARSON DATE 02 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.1	0.0	18.0	47.0	28.0	0.0	4.	15.	0.0	0.0
2	3.2	0.0	14.0	0.0	0.0	30.0	4.	10.	0.0	0.0
3	3.2	0.0	36.0	59.0	29.0	0.0	4.	20.	0.0	0.0
4	3.2	0.0	18.0	0.0	0.0	19.0	3.	8.	0.0	0.0
5	3.4	0.0	39.0	0.0	0.0	55.0	5.	80.	0.0	0.0
6	3.3	0.0	35.0	0.0	0.0	30.0	5.	70.	0.0	0.0
7	3.4	0.0	13.0	32.0	17.0	0.0	4.	5.	0.0	0.0
8	3.3	0.0	35.0	64.0	28.0	0.0	4.	8.	0.0	0.0
9	3.3	0.0	17.0	34.0	12.0	0.0	5.	60.	0.0	0.0
10	3.2	0.0	16.0	0.0	0.0	30.0	5.	50.	0.0	0.0
11	3.4	0.0	33.0	68.0	32.0	0.0	4.	6.	0.0	0.0
12	3.4	0.0	35.0	0.0	0.0	54.0	4.	3.	0.0	0.0
13	3.3	0.0	26.0	54.0	20.0	0.0	4.	10.	0.0	0.0
14	3.3	0.0	26.0	0.0	0.0	23.0	5.	85.	0.0	0.0
15	3.3	0.0	22.0	0.0	0.0	12.0	4.	40.	0.0	0.0
16	3.3	0.0	17.0	25.0	14.0	0.0	3.	10.	0.0	0.0
17	3.3	0.0	24.0	52.0	23.0	0.0	4.	5.	0.0	0.0
18	3.2	0.0	20.0	48.0	18.0	0.0	5.	55.	0.0	0.0
19	3.4	0.0	25.0	0.0	0.0	50.0	4.	40.	0.0	0.0
20	3.3	0.0	12.0	39.0	15.0	0.0	4.	25.	0.0	0.0
MEAN	3.3	0.0	24.1	47.5	21.5	33.7	4.	30.	0.0	0.0
STD DEV	.1	0.0	8.7	13.7	6.9	15.7	1.	27.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA FARSON              DATE 26  MAY      1981
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD     NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH   VEG.  SEED
         VEG.  REPR.                              CLASS   PERCENT  TWIG  STALK
                                                                   LNGTH LNGTH
******************************************************************************
   1     3.2   9.0   23.0   35.0   28.0   0.0    0.      0.       0.0   0.0
   2     3.2   9.0   19.0   37.0   19.0   0.0    0.      0.       0.0   0.0
   3     3.3   9.2   25.0   50.0   25.0   0.0    0.      0.       0.0   0.0
   4     3.3   9.2   15.0   25.0   15.0   0.0    0.      0.       0.0   0.0 25% DECADENT
   5     3.2   9.3   36.0   47.0   36.0   0.0    0.      0.       0.0   0.0 65% DECADENT
   6     3.1   9.0   27.0   21.0   27.0   0.0    0.      0.       0.0   0.0 70% DECADENT
   7     3.1   9.2   14.0   20.0   14.0   0.0    0.      0.       0.0   0.0
   8     3.0   9.2   31.0   63.0   31.0   0.0    0.      0.       0.0   0.0 10% DECADENT
   9     3.1   9.3   19.0   41.0   19.0   0.0    0.      0.       0.0   0.0
  10     3.2   9.0   15.0   25.0   15.0   0.0    0.      0.       0.0   0.0 65% DECADENT
  11     3.2   9.3   32.0   44.0   32.0   0.0    0.      0.       0.0   0.0
  12     3.3   9.3   27.0   53.0   27.0   0.0    0.      0.       0.0   0.0
  13     3.1   9.3   25.0   54.0   25.0   0.0    0.      0.       0.0   0.0 80% DECADENT
  14     3.1   9.0   26.0   21.0   26.0   0.0    0.      0.       0.0   0.0
  15     3.0   9.1   23.0   27.0   23.0   0.0    0.      0.       0.0   0.0
  16     3.2   9.3   16.0   24.0   16.0   0.0    0.      0.       0.0   0.0
  17     3.1   9.4   21.0   50.0   21.0   0.0    0.      0.       0.0   0.0 50% DECADENT
  18     3.1   9.2   20.0   23.0   20.0   0.0    0.      0.       0.0   0.0
  19     3.1   9.4   22.0   22.0   22.0   0.0    0.      0.       0.0   0.0
  20     3.1   9.2   16.0   37.0   16.0   0.0    0.      0.       0.0   0.0


   MEAN  3.2   9.2   22.6   36.0   22.9   0.0    0.      0.       0.0   0.0

 STD DEV  .1    .1    6.1   13.5    6.2   0.0    0.      0.       0.0   0.0


  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
```

ARTEMISIA TRIDENTATA   STUDY AREA FARSON   DATE 05 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.2	9.1	20.9	0.0	0.0	0.0	3.	0.	0.0	0.0
2	3.2	9.1	12.3	0.0	0.0	0.0	3.	5.	0.0	0.0
3	3.3	9.2	32.0	0.0	0.0	0.0	4.	10.	0.0	0.0
4	3.3	9.2	17.5	0.0	0.0	0.0	3.	12.	0.0	0.0
5	3.2	9.3	32.0	0.0	0.0	0.0	5.	70.	0.0	0.0
6	3.2	9.0	24.8	0.0	0.0	0.0	5.	50.	0.0	0.0
7	3.3	9.2	12.1	0.0	0.0	0.0	3.	5.	0.0	0.0
8	3.3	9.2	29.7	0.0	0.0	0.0	4.	5.	0.0	0.0
9	3.4	9.3	17.8	0.0	0.0	0.0	3.	3.	0.0	0.0
10	3.2	9.1	20.1	0.0	0.0	0.0	5.	70.	0.0	0.0
11	3.4	9.3	34.5	0.0	0.0	0.0	4.	5.	0.0	0.0
12	3.4	9.2	31.5	0.0	0.0	0.0	4.	2.	0.0	0.0
13	3.4	9.2	22.4	0.0	0.0	0.0	4.	10.	0.0	0.0
14	3.2	9.1	30.0	0.0	0.0	0.0	5.	80.	0.0	0.0
15	3.2	9.1	18.3	0.0	0.0	0.0	4.	35.	0.0	0.0
16	3.2	9.1	16.6	0.0	0.0	0.0	3.	3.	0.0	0.0
17	3.4	9.1	24.6	0.0	0.0	0.0	4.	4.	0.0	0.0
18	3.1	9.2	19.2	0.0	0.0	0.0	5.	70.	0.0	0.0
19	3.2	9.2	27.5	0.0	0.0	0.0	4.	30.	0.0	0.0
20	3.2	9.2	14.1	0.0	0.0	0.0	4.	20.	0.0	0.0
MEAN	3.3	9.2	22.9	0.0	0.0	0.0	4.	26.	0.0	0.0
STD DEV	.1	.1	7.1	0.0	0.0	0.0	1.	28.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA FARSON                DATE 16  JUNE      1981
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PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT   DEAD      NEW    NEW
NO.    STAGE SCORE   HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH    VEG.   SEED
        VEG.  REPR.                                   CLASS   PERCENT   TWIG   STALK
                                                                       LNGTH  LNGTH
*********************************************************************************************
   1     3.3   9.1    22.0    0.0     0.0     0.0    0.       0.        0.0    1.5
   2     3.3   9.2    12.0    0.0     0.0     0.0    0.       0.        0.0    2.0
   3     3.4   9.2    33.5    0.0     0.0     0.0    0.       0.        0.0    2.5
   4     3.4   9.2    18.5    0.0     0.0     0.0    0.       0.        0.0    1.6
   5     3.4   9.3    31.5    0.0     0.0     0.0    0.       0.        0.0    2.7
   6     3.3   9.2    29.5    0.0     0.0     0.0    0.       0.        0.0    3.0
   7     3.3   9.2    12.5    0.0     0.0     0.0    0.       0.        0.0    1.6
   8     3.3   9.2    33.0    0.0     0.0     0.0    0.       0.        0.0    2.0
   9     3.4   9.3    21.5    0.0     0.0     0.0    0.       0.        0.0    2.0
  10     3.3   9.1    16.5    0.0     0.0     0.0    0.       0.        0.0     .5
  11     3.4   9.3    31.5    0.0     0.0     0.0    0.       0.        0.0    2.0
  12     3.4   9.3    29.5    0.0     0.0     0.0    0.       0.        0.0    3.0
  13     3.4   9.2    25.8    0.0     0.0     0.0    0.       0.        0.0    2.0
  14     3.4   9.2    24.6    0.0     0.0     0.0    0.       0.        0.0    2.9
  15     3.4   9.1    21.5    0.0     0.0     0.0    0.       0.        0.0    2.3
  16     3.4   9.2    14.5    0.0     0.0     0.0    0.       0.        0.0    1.7
  17     3.4   9.2    22.5    0.0     0.0     0.0    0.       0.        0.0    3.2
  18     3.3   9.2    19.8    0.0     0.0     0.0    0.       0.        0.0     .7
  19     3.3   9.2    27.4    0.0     0.0     0.0    0.       0.        0.0     .5
  20     3.3   9.2    15.5    0.0     0.0     0.0    0.       0.        0.0    1.8


   MEAN  3.4   9.2    23.2    0.0     0.0     0.0    0.       0.        0.0    2.0

STD DEV   .1    .1     6.9    0.0     0.0     0.0    0.       0.        0.0     .8


 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA    STUDY AREA FARSON                  DATE 30   JUNE      1981
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PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW   NEW
NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE      BRANCH   VEG.  SEED
       VEG.  REPR.                                   CLASS    PERCENT  TWIG  STALK
                                                                       LNGTH LNGTH
*******************************************************************************
   1     3.5   9.1     22.3    0.0     0.0     0.0    3.       11.     0.0   0.0
   2     3.2   9.2     12.7    0.0     0.0     0.0    2.        5.     0.0   0.0
   3     3.5   9.2     36.4    0.0     0.0     0.0    4.       15.     0.0   8.0
   4     3.5   9.2     19.6    0.0     0.0     0.0    3.       10.     0.0   3.2
   5     3.6   9.3     32.6    0.0     0.0     0.0    5.       50.     0.0   5.5
   6     3.2   9.2     30.5    0.0     0.0     0.0    5.       55.     0.0   0.0
   7     3.4   9.2     14.8    0.0     0.0     0.0    2.        7.     0.0   1.0
   8     3.5   9.2     37.5    0.0     0.0     0.0    3.       18.     0.0   2.1
   9     3.5   9.3     24.5    0.0     0.0     0.0    3.        2.     0.0   2.4
  10     3.4   9.1     24.0    0.0     0.0     0.0    5.       60.     0.0   0.0
  11     3.5   9.3     33.0    0.0     0.0     0.0    4.        2.     0.0   5.7
  12     3.5   9.3     40.5    0.0     0.0     0.0    4.        1.     0.0   2.0
  13     3.5   9.2     23.2    0.0     0.0     0.0    3.       20.     0.0   4.7
  14     3.4   9.2     30.0    0.0     0.0     0.0    5.       70.     0.0   0.0
  15     3.3   9.1     20.5    0.0     0.0     0.0    5.       60.     0.0   0.0
  16     3.5   9.2     19.4    0.0     0.0     0.0    2.       10.     0.0   3.0
  17     3.5   9.2     24.7    0.0     0.0     0.0    3.        5.     0.0   4.6
  18     3.5   9.2     20.0    0.0     0.0     0.0    5.       75.     0.0   0.0
  19     3.6   9.2     27.8    0.0     0.0     0.0    4.       55.     0.0   0.0
  20     3.4   9.2     19.3    0.0     0.0     0.0    5.       17.     0.0   0.0


   MEAN  3.5   9.2     25.7    0.0     0.0     0.0    4.       27.     0.0   3.8

STD DEV   .1    .1      7.6    0.0     0.0     0.0    1.       26.     0.0   2.1

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA FARSON                 DATE 14  JULY    1981
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PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW    NEW
NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.   SEED
       VEG.  REPR.                              CLASS  PERCENT  TWIG   STALK
                                                                LNGTH  LNGTH
*****************************************************************************
  1    4.2   0.0    22.0    0.0    0.0    0.0    0.      0.     0.0    0.0
  2    4.4   0.0    13.0    0.0    0.0    0.0    0.      0.     0.0    0.0
  3    4.2   9.2    30.0    0.0    0.0    0.0    0.      0.     0.0    6.5
  4    4.3   0.0    18.0    0.0    0.0    0.0    0.      0.     0.0    0.0
  5    4.2   9.2    32.0    0.0    0.0    0.0    0.      0.     0.0    6.0
  6    4.0   0.0    26.0    0.0    0.0    0.0    0.      0.     0.0    0.0
  7    4.3   0.0    13.0    0.0    0.0    0.0    0.      0.     0.0    0.0
  8    4.3   0.0    29.0    0.0    0.0    0.0    0.      0.     0.0    0.0
  9    4.3   0.0    16.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 10    4.0   0.0    20.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 11    4.3   9.2    35.0    0.0    0.0    0.0    0.      0.     0.0    6.5
 12    4.2   9.2    30.0    0.0    0.0    0.0    0.      0.     0.0    7.0
 13    4.2   9.2    23.0    0.0    0.0    0.0    0.      0.     0.0    6.0
 14    4.0   0.0    29.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 15    4.2   0.0    18.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 16    4.3   0.0    19.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 17    4.3   9.2    23.0    0.0    0.0    0.0    0.      0.     0.0    4.5
 18    4.2   0.0    14.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 19    4.3   0.0    22.0    0.0    0.0    0.0    0.      0.     0.0    0.0
 20    4.3   0.0    16.0    0.0    0.0    0.0    0.      0.     0.0    0.0


  MEAN 4.2   9.2    22.4    0.0    0.0    0.0    0.      0.     0.0    6.1

STD DEV .1    .0     6.7    0.0    0.0    0.0    0.      0.     0.0     .9


 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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  ARTEMISIA TRIDENTATA   STUDY AREA FARSON                  DATE 28  JULY      1981
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   PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW    NEW
   NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH    VEG.   SEED
          VEG.  REPR.                                   CLASS   PERCENT   TWIG   STALK
                                                                          LNGTH  LNGTH
***********************************************************************************
     1    4.3   9.1     20.0    0.0     0.0     0.0     0.        0.      2.0    0.0
     2    4.1   9.2     14.0    0.0     0.0     0.0     0.        0.      0.0    0.0
     3    4.3   9.5     35.0    0.0     0.0     0.0     0.        0.       .5    5.0
     4    4.4   9.2     17.0    0.0     0.0     0.0     0.        0.      1.5    0.0
     5    4.3   9.5     22.0    0.0     0.0     0.0     0.        0.      1.3    7.0
     6    4.1   9.2     28.0    0.0     0.0     0.0     0.        0.      0.0    0.0
     7    4.4   9.2     10.5    0.0     0.0     0.0     0.        0.      1.5    0.0
     8    4.2   9.2     36.0    0.0     0.0     0.0     0.        0.      0.0    0.0
     9    4.2   9.3     15.5    0.0     0.0     0.0     0.        0.      0.0    0.0
    10    4.1   9.1     16.0    0.0     0.0     0.0     0.        0.      0.0    0.0
    11    4.2   9.5     39.5    0.0     0.0     0.0     0.        0.       .3    7.4
    12    4.3   9.5     33.0    0.0     0.0     0.0     0.        0.      1.5    7.5
    13    4.3   9.5     22.0    0.0     0.0     0.0     0.        0.      1.3    5.8
    14    4.1   9.2     24.0    0.0     0.0     0.0     0.        0.      0.0    0.0
    15    4.2   9.1     22.0    0.0     0.0     0.0     0.        0.      0.0    0.0
    16    4.3   9.5     15.0    0.0     0.0     0.0     0.        0.      1.5    3.8
    17    4.3   9.5     22.0    0.0     0.0     0.0     0.        0.      1.5    4.7
    18    4.2   9.2     19.5    0.0     0.0     0.0     0.        0.      0.0    0.0
    19    4.2   9.2     25.0    0.0     0.0     0.0     0.        0.      0.0    0.0
    20    4.1   9.2     13.0    0.0     0.0     0.0     0.        0.      0.0    0.0

    MEAN  4.2   9.3     22.5    0.0     0.0     0.0     0.        0.      1.3    5.9

  STD DEV  .1    .2      8.2    0.0     0.0     0.0     0.        0.       .5    1.5

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA FARSON                      DATE 11  AUGUST   1981
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 PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD    NEW   NEW
 NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH   VEG.  SEED
        VEG.  REPR.                                   CLASS  PERCENT  TWIG  STALK
                                                                      LNGTH LNGTH
*******************************************************************************
   1    4.3   9.3     20.8     0.0     0.0     0.0     4.       8.    .3    0.0
   2    4.2   9.2     14.7     0.0     0.0     0.0     3.      15.    .3    0.0
   3    4.3   9.5     37.5     0.0     0.0     0.0     4.      20.    .4    0.0
   4    4.2   9.3     22.6     0.0     0.0     0.0     3.      10.    .5    0.0
   5    4.5   9.5     30.9     0.0     0.0     0.0     4.      30.    .5    0.0
   6    4.3   9.0     29.2     0.0     0.0     0.0     4.      20.    .3    0.0
   7    4.3   9.4     14.0     0.0     0.0     0.0     3.      10.    .3    0.0
   8    4.5   9.4     37.8     0.0     0.0     0.0     3.       2.    .4    0.0
   9    4.4   9.4     27.0     0.0     0.0     0.0     3.       7.    .4    0.0
  10    4.2   9.0     18.4     0.0     0.0     0.0     4.      55.    .3    0.0 DECADENT
  11    4.4   9.8     33.9     0.0     0.0     0.0     4.       4.    .5    0.0
  12    4.6   9.8     32.4     0.0     0.0     0.0     4.       6.    .5    0.0
  13    4.5   9.5     21.0     0.0     0.0     0.0     4.      15.    .4    0.0
  14    4.2   9.0     28.2     0.0     0.0     0.0     4.      70.    .3    0.0
  15    4.4   9.4     22.5     0.0     0.0     0.0     4.      30.    .3    0.0
  16    4.6   9.8     18.9     0.0     0.0     0.0     3.      25.    .4    0.0
  17    4.6   9.8     28.3     0.0     0.0     0.0     3.      16.    .5    0.0
  18    4.5   9.4     20.0     0.0     0.0     0.0     4.      50.    .3    0.0 DECADENT
  19    4.3   9.4     26.8     0.0     0.0     0.0     4.      45.    .4    0.0
  20    4.4   9.4     18.7     0.0     0.0     0.0     3.      35.    .3    0.0


   MEAN  4.4   9.4     25.2     0.0     0.0     0.0     4.      24.    .4    0.0

 STD DEV  .1    .3      7.1     0.0     0.0     0.0     1.      19.    .1    0.0


  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA FARSON   DATE 24 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE		PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
	VEG.	REPR.								
1	4.7	0.0	24.5	0.0	0.0	0.0	0.	0.	1.0	0.0
2	4.8	0.0	14.0	0.0	0.0	0.0	0.	0.	2.0	0.0
3	4.8	9.9	34.0	0.0	0.0	0.0	0.	0.	2.5	4.5
4	4.7	0.0	18.0	0.0	0.0	0.0	0.	0.	1.0	0.0
5	4.8	9.9	33.0	0.0	0.0	0.0	0.	0.	1.0	6.5
6	4.9	10.0	32.0	0.0	0.0	0.0	0.	0.	1.5	5.0
7	4.8	0.0	14.0	0.0	0.0	0.0	0.	0.	1.0	0.0
8	4.8	0.0	33.0	0.0	0.0	0.0	0.	0.	1.0	0.0
9	4.6	0.0	19.0	0.0	0.0	0.0	0.	0.	.5	0.0
10	4.6	0.0	19.0	0.0	0.0	0.0	0.	0.	.5	0.0
11	4.8	10.1	40.0	0.0	0.0	0.0	0.	0.	2.0	7.5
12	4.9	10.0	28.5	0.0	0.0	0.0	0.	0.	3.0	7.6
13	4.7	9.7	20.0	0.0	0.0	0.0	0.	0.	.6	6.0
14	4.8	9.9	28.5	0.0	0.0	0.0	0.	0.	1.0	3.5
15	4.7	9.9	19.0	0.0	0.0	0.0	0.	0.	.5	2.0
16	4.7	9.9	16.5	0.0	0.0	0.0	0.	0.	.5	4.5
17	4.7	9.9	25.3	0.0	0.0	0.0	0.	0.	1.0	5.0
18	4.6	0.0	20.5	0.0	0.0	0.0	0.	0.	.2	0.0
19	4.7	0.0	27.0	0.0	0.0	0.0	0.	0.	.1	0.0
20	4.6	0.0	19.5	0.0	0.0	0.0	0.	0.	.5	0.0
MEAN	4.7	9.9	24.3	0.0	0.0	0.0	0.	0.	1.1	5.2
STD DEV	.1	.1	7.4	0.0	0.0	0.0	0.	0.	.8	1.8

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA FARSON              DATE 12  SEPT     1981
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
**************************************************************************
   1    5.0   0.0    22.0    0.0    0.0    0.0   0.       0.      .5   0.0
   2    5.2   0.0    15.2    0.0    0.0    0.0   0.       0.      .5   0.0
   3    5.2   0.0    31.5    0.0    0.0    0.0   0.       0.      .8   0.0
   4    5.1   0.0    20.7    0.0    0.0    0.0   0.       0.     1.0   0.0
   5    5.2   0.0    36.0    0.0    0.0    0.0   0.       0.      .5   0.0
   6    4.9  11.4    31.0    0.0    0.0    0.0   0.       0.     1.5   7.8
   7    4.9   0.0    12.8    0.0    0.0    0.0   0.       0.     1.0   0.0
   8    4.9   0.0    34.4    0.0    0.0    0.0   0.       0.      .5   0.0
   9    4.9   0.0    20.2    0.0    0.0    0.0   0.       0.      .8   0.0
  10    5.1   0.0    20.5    0.0    0.0    0.0   0.       0.      .5   0.0
  11    4.9  11.6    38.5    0.0    0.0    0.0   0.       0.     1.5   6.7
  12    4.9  11.4    32.0    0.0    0.0    0.0   0.       0.     2.5   7.2
  13    4.9   0.0    24.5    0.0    0.0    0.0   0.       0.      .5   0.0
  14    5.2   0.0    26.0    0.0    0.0    0.0   0.       0.     0.0   0.0
  15    5.1   9.9    20.5    0.0    0.0    0.0   0.       0.     1.5   2.0
  16    5.0  11.5    16.0    0.0    0.0    0.0   0.       0.      .5   3.5
  17    4.9  11.4    30.4    0.0    0.0    0.0   0.       0.     1.0   4.5
  18    5.0   0.0    21.0    0.0    0.0    0.0   0.       0.      .5   0.0
  19    5.0   0.0    23.8    0.0    0.0    0.0   0.       0.      .5   0.0
  20    5.1   0.0    18.0    0.0    0.0    0.0   0.       0.      .5   0.0


  MEAN  5.0  11.2    24.8    0.0    0.0    0.0   0.       0.      .9   5.3

 STD DEV .1    .6     7.4    0.0    0.0    0.0   0.       0.      .5   2.3


  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA HORSECREEK            DATE  2  MAY      1981
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
*****************************************************************************
   1    3.0   0.0     0.0    0.0    0.0    0.0   0.      0.      0.0   0.0
   2    3.1   0.0     0.0    0.0    0.0    0.0   0.      0.      0.0   0.0
   3    3.2   0.0     0.0    0.0    0.0    0.0   0.      0.      0.0   0.0
   4    3.2   0.0     0.0    0.0    0.0    0.0   0.      0.      0.0   0.0
   5    3.2   0.0     0.0    0.0    0.0    0.0   0.      0.      0.0   0.0
   6    3.1   0.0     0.0    0.0    0.0    0.0   0.      0.      0.0   0.0
   7    3.1   0.0     0.0    0.0    0.0    0.0   0.      0.      0.0   0.0
   8    3.3   0.0     0.0    0.0    0.0    0.0   0.      0.      0.0   0.0
   9    2.8   0.0     0.0    0.0    0.0    0.0   0.      0.      0.0   0.0
  10    2.9   0.0     0.0    0.0    0.0    0.0   0.      0.      0.0   0.0
  11    2.9   0.0     0.0    0.0    0.0    0.0   0.      0.      0.0   0.0
  12    2.9   0.0     0.0    0.0    0.0    0.0   0.      0.      0.0   0.0
  13    3.1   0.0     0.0    0.0    0.0    0.0   0.      0.      0.0   0.0
  14    2.9   0.0     0.0    0.0    0.0    0.0   0.      0.      0.0   0.0
  15    2.7   0.0     0.0    0.0    0.0    0.0   0.      0.      0.0   0.0
  16    2.9   0.0     0.0    0.0    0.0    0.0   0.      0.      0.0   0.0
  17    2.8   0.0     0.0    0.0    0.0    0.0   0.      0.      0.0   0.0
  18    3.2   0.0     0.0    0.0    0.0    0.0   0.      0.      0.0   0.0
  19    2.7   0.0     0.0    0.0    0.0    0.0   0.      0.      0.0   0.0
  20    2.9   0.0     0.0    0.0    0.0    0.0   0.      0.      0.0   0.0


   MEAN 3.0   0.0     0.0    0.0    0.0    0.0   0.      0.      0.0   0.0

STD DEV  .2   0.0     0.0    0.0    0.0    0.0   0.      0.      0.0   0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA HORSECREEK   DATE 19 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH	
1	3.5	9.3	31.0	68.0	63.0	0.0	0.	0.	0.0	0.0	DECADENT
2	3.4	9.4	34.0	60.0	50.0	0.0	0.	0.	0.0	0.0	
3	3.3	9.3	44.0	94.0	53.0	0.0	0.	0.	0.0	0.0	
4	3.3	9.4	62.0	76.0	48.0	0.0	0.	0.	0.0	0.0	
5	3.3	9.1	15.0	25.0	23.0	0.0	0.	0.	0.0	0.0	
6	3.4	9.2	16.0	22.0	15.0	0.0	0.	0.	0.0	0.0	
7	3.3	9.2	51.0	81.0	40.0	0.0	0.	0.	0.0	0.0	
8	3.4	9.1	6.0	12.0	6.0	0.0	0.	0.	0.0	0.0	
9	3.4	9.2	24.0	60.0	20.0	0.0	0.	0.	0.0	0.0	
10	3.4	9.4	25.0	29.0	16.0	0.0	0.	0.	0.0	0.0	
11	3.2	9.0	25.0	39.0	17.0	0.0	0.	0.	0.0	0.0	DECADENT
12	3.3	9.1	19.0	30.0	12.0	0.0	0.	0.	0.0	0.0	
13	3.2	9.0	37.0	57.0	28.0	0.0	0.	0.	0.0	0.0	
14	3.2	9.0	33.0	35.0	22.0	0.0	0.	0.	0.0	0.0	DECADENT
15	3.1	9.0	34.0	45.0	35.0	0.0	0.	0.	0.0	0.0	
16	3.3	9.0	22.0	37.0	20.0	0.0	0.	0.	0.0	0.0	
17	3.2	0.0	44.0	39.0	32.0	0.0	0.	0.	0.0	0.0	DECADENT
18	3.3	9.1	26.0	17.0	7.0	0.0	0.	0.	0.0	0.0	
19	3.1	0.0	22.0	80.0	10.0	0.0	0.	0.	0.0	0.0	DECADENT
20	3.2	0.0	13.0	14.0	8.0	0.0	0.	0.	0.0	0.0	DECADENT
MEAN	3.3	9.2	29.2	48.0	26.3	0.0	0.	0.	0.0	0.0	
STD DEV	.1	.1	13.7	26.8	16.9	0.0	0.	0.	0.0	0.0	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMESIA TRIDENTATA    STUDY AREA HORSECREEK              DATE 03  JUNE      1981
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW    NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH  VEG.   SEED
        VEG.  REPR.                              CLASS  PERCENT TWIG   STALK
                                                                LNGTH  LNGTH
*************************************************************************************
   1    3.5   9.5    32.5   68.0   64.0    0.0    0.     0.     0.0    0.0 75% DECADENT
   2    3.6   9.6    40.0   80.0   55.0    0.0    0.     0.     0.0    0.0
   3    3.6   9.5    48.0   90.0   50.0    0.0    0.     0.     0.0    0.0
   4    3.5   9.6    72.5   90.0   56.0    0.0    0.     0.     0.0    0.0
   5    3.4   9.5    15.0   30.0   17.0    0.0    0.     0.     0.0    0.0
   6    3.4   9.4    18.5   24.0   20.0    0.0    0.     0.     0.0    0.0
   7    3.5   9.5    51.0   27.0   41.5    0.0    0.     0.     0.0    0.0
   8    3.5   9.3    10.5    9.0    7.5    0.0    0.     0.     0.0    0.0
   9    3.5   9.5    28.0   59.0   43.0    0.0    0.     0.     0.0    0.0
  10    3.6   9.6    30.0   27.0   18.0    0.0    0.     0.     0.0    0.0
  11    3.5   9.5    25.5   40.0   18.0    0.0    0.     0.     0.0    0.0 DECADENT
  12    3.6   9.6    22.0   37.0   18.0    0.0    0.     0.     0.0    0.0
  13    3.5   9.5    38.0   50.0   48.0    0.0    0.     0.     0.0    0.0
  14    3.4   9.4    28.0   40.0   27.0    0.0    0.     0.     0.0    0.0 DECADENT
  15    3.5   9.5    35.0   48.0   46.0    0.0    0.     0.     0.0    0.0
  16    3.5   9.5    26.0   35.0   17.0    0.0    0.     0.     0.0    0.0
  17    3.4   9.3    45.0   40.0   29.0    0.0    0.     0.     0.0    0.0
  18    3.5   9.5    27.0   19.0   13.0    0.0    0.     0.     0.0    0.0 50% DECADENT
  19    3.5   9.3    21.0   61.0   12.5    0.0    0.     0.     0.0    0.0 DECADENT
  20    3.4   9.4    12.0   15.0   13.5    0.0    0.     0.     0.0    0.0


   MEAN 3.5   9.5    31.3   46.5   30.7    0.0    0.     0.     0.0    0.0

STD DEV  .1    .1    14.9   26.2   17.7    0.0    0.     0.     0.0    0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA HORSECREEK            DATE 16  JUNE     1981
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PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH  VEG.  SEED
       VEG.  REPR.                              CLASS   PERCENT TWIG  STALK
                                                                LNGTH LNGTH

*******************************************************************************
  1    3.8   9.5    36.8   0.0    0.0    0.0    5.      0.      0.0    8.0   AGE CLASS
  2    4.2   9.5    49.5   0.0    0.0    0.0    4.      0.      0.0   20.0     4.5
  3    4.1   9.5    52.0   0.0    0.0    0.0    4.      0.      0.0   11.5
  4    4.2   9.6    37.0   0.0    0.0    0.0    4.      0.      0.0   16.0
  5    4.2   9.5    19.2   0.0    0.0    0.0    5.      0.      0.0    8.0
  6    4.3   9.5    22.6   0.0    0.0    0.0    4.      0.      0.0    8.0
  7    4.2   9.5    69.0   0.0    0.0    0.0    4.      0.      0.0   11.5
  8    4.2   9.4    11.0   0.0    0.0    0.0    5.      0.      0.0    4.0
  9    4.2   9.5    31.0   0.0    0.0    0.0    4.      0.      0.0   12.0     4.5
 10    4.3   9.5    37.5   0.0    0.0    0.0    4.      0.      0.0   21.0
 11    4.2   9.5    30.5   0.0    0.0    0.0    4.      0.      0.0   15.0     4.5
 12    4.1   9.5    26.5   0.0    0.0    0.0    4.      0.      0.0    9.0     4.5
 13    4.3   9.6    42.0   0.0    0.0    0.0    4.      0.      0.0   11.0
 14    4.1   9.5    32.0   0.0    0.0    0.0    5.      0.      0.0   10.0
 15    4.1   9.5    42.0   0.0    0.0    0.0    3.      0.      0.0   11.0     3.5
 16    4.2   9.6    31.0   0.0    0.0    0.0    4.      0.      0.0   16.0     4.5
 17    4.1   9.5    49.0   0.0    0.0    0.0    5.      0.      0.0    5.0
 18    4.1   9.6    36.0   0.0    0.0    0.0    5.      0.      0.0   10.0
 19    4.2   9.5    23.0   0.0    0.0    0.0    5.      0.      0.0    7.0
 20    4.2   9.5    13.0   0.0    0.0    0.0    5.      0.      0.0    8.0


  MEAN 4.2   9.5    34.5   0.0    0.0    0.0    4.      0.      0.0   11.1

STD DEV .1    .0    14.0   0.0    0.0    0.0    1.      0.      0.0    4.5

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA HORSECREEK   DATE 29 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.0	9.6	36.5	0.0	0.0	0.0	0.	0.	0.0	10.0
2	4.6	9.7	51.1	0.0	0.0	0.0	0.	0.	0.0	20.0
3	4.4	9.7	51.0	0.0	0.0	0.0	0.	0.	0.0	9.0
4	4.4	9.6	81.0	0.0	0.0	0.0	0.	0.	0.0	15.0
5	4.5	9.6	18.0	0.0	0.0	0.0	0.	0.	0.0	9.5
6	4.6	9.6	26.4	0.0	0.0	0.0	0.	0.	0.0	9.0
7	4.4	9.7	58.0	0.0	0.0	0.0	0.	0.	0.0	11.0
8	4.5	0.0	11.0	0.0	0.0	0.0	0.	0.	0.0	0.0
9	4.5	9.7	42.0	0.0	0.0	0.0	0.	0.	0.0	13.0
10	4.4	9.6	38.0	0.0	0.0	0.0	0.	0.	0.0	22.0
11	4.5	9.6	34.0	0.0	0.0	0.0	0.	0.	0.0	17.0
12	4.1	9.7	26.0	0.0	0.0	0.0	0.	0.	0.0	13.0
13	4.5	9.6	50.0	0.0	0.0	0.0	0.	0.	0.0	15.0
14	4.2	9.5	30.0	0.0	0.0	0.0	0.	0.	0.0	12.0
15	4.5	9.6	45.0	0.0	0.0	0.0	0.	0.	0.0	13.5
16	4.5	9.7	27.0	0.0	0.0	0.0	0.	0.	0.0	15.0
17	4.4	9.6	53.0	0.0	0.0	0.0	0.	0.	0.0	9.5
18	4.0	9.7	35.0	0.0	0.0	0.0	0.	0.	0.0	13.0
19	4.1	9.6	24.0	0.0	0.0	0.0	0.	0.	0.0	8.0
20	4.5	9.6	14.0	0.0	0.0	0.0	0.	0.	0.0	9.0
MEAN	4.4	9.6	37.6	0.0	0.0	0.0	0.	0.	0.0	12.8
STD DEV	.2	.1	16.9	0.0	0.0	0.0	0.	0.	0.0	3.9

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA   STUDY AREA HORSECREEK   DATE 14 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.2	9.6	27.6	0.0	0.0	0.0	5.	78.	2.0	0.0
2	4.4	9.6	38.0	0.0	0.0	0.0	5.	30.	6.5	0.0
3	4.2	9.6	41.0	0.0	0.0	0.0	4.	2.	4.0	0.0
4	4.4	9.6	62.0	0.0	0.0	0.0	5.	5.	4.6	0.0
5	4.3	9.6	18.5	0.0	0.0	0.0	5.	25.	1.0	0.0
6	4.2	9.5	18.7	0.0	0.0	0.0	3.	10.	2.8	0.0
7	4.5	9.7	65.0	0.0	0.0	0.0	4.	7.	3.6	0.0
8	4.2	9.4	9.0	0.0	0.0	0.0	5.	60.	1.0	0.0
9	4.6	9.7	34.0	0.0	0.0	0.0	4.	3.	2.6	0.0
10	4.6	9.7	39.0	0.0	0.0	0.0	4.	12.	4.0	0.0
11	4.4	9.7	26.6	0.0	0.0	0.0	5.	45.	1.4	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	4.5	9.7	27.0	0.0	0.0	0.0	4.	7.	4.5	0.0
14	4.5	9.5	30.0	0.0	0.0	0.0	5.	60.	1.5	0.0
15	4.5	9.5	41.0	0.0	0.0	0.0	4.	13.	2.0	0.0
16	4.6	9.6	42.0	0.0	0.0	0.0	5.	75.	6.5	0.0
17	4.6	9.5	44.0	0.0	0.0	0.0	5.	45.	2.0	0.0
18	4.2	9.6	39.5	0.0	0.0	0.0	5.	75.	1.9	0.0
19	4.3	9.4	22.0	0.0	0.0	0.0	5.	85.	1.0	0.0
20	4.5	9.5	15.9	0.0	0.0	0.0	5.	80.	4.0	0.0
MEAN	4.4	9.6	33.7	0.0	0.0	0.0	5.	38.	3.0	0.0
STD DEV	.2	.1	14.5	0.0	0.0	0.0	1.	31.	1.7	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMESIA TRIDENTATA   STUDY AREA HORSECREEK   DATE 28 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH	
1	4.2	9.6	33.5	0.0	0.0	0.0	0.	0.	0.0	12.0	
2	4.6	9.7	53.0	0.0	0.0	0.0	0.	0.	0.0	24.5	
3	4.4	9.7	54.0	0.0	0.0	0.0	0.	0.	0.0	12.0	
4	4.5	9.6	83.0	0.0	0.0	0.0	0.	0.	0.0	20.0	
5	4.5	9.6	19.0	0.0	0.0	0.0	0.	0.	0.0	10.0	
6	4.6	9.5	22.0	0.0	0.0	0.0	0.	0.	0.0	9.0	
7	4.4	9.7	66.0	0.0	0.0	0.0	0.	0.	0.0	13.0	
8	4.5	0.0	13.0	0.0	0.0	0.0	0.	0.	0.0	0.0	
9	4.5	9.7	30.5	0.0	0.0	0.0	0.	0.	0.0	14.0	
10	4.4	9.6	38.0	0.0	0.0	0.0	0.	0.	0.0	19.0	
11	4.5	9.7	22.0	0.0	0.0	0.0	0.	0.	0.0	18.0	
12	4.5	9.7	24.0	0.0	0.0	0.0	0.	0.	0.0	9.0	NEW PLANT
13	4.6	9.6	43.0	0.0	0.0	0.0	0.	0.	0.0	11.0	
14	4.6	0.0	31.0	0.0	0.0	0.0	0.	0.	0.0	0.0	
15	4.5	9.6	42.0	0.0	0.0	0.0	0.	0.	0.0	15.0	
16	4.5	9.7	30.5	0.0	0.0	0.0	0.	0.	0.0	20.0	
17	4.5	9.6	41.0	0.0	0.0	0.0	0.	0.	0.0	6.0	
18	4.1	9.7	38.5	0.0	0.0	0.0	0.	0.	0.0	14.0	
19	4.2	9.6	23.0	0.0	0.0	0.0	0.	0.	0.0	8.0	
20	4.5	9.6	16.5	0.0	0.0	0.0	0.	0.	0.0	10.0	
MEAN	4.5	9.6	36.2	0.0	0.0	0.0	0.	0.	0.0	13.6	
STD DEV	.1	.1	17.5	0.0	0.0	0.0	0.	0.	0.0	5.0	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMESIA TRIDENTATA   STUDY AREA HORSECREEK          DATE 11  AUGUST   1981
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PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW   NEW
NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE      BRANCH   VEG.  SEED
       VEG.  REPR.                                   CLASS    PERCENT  TWIG  STALK
                                                                       LNGTH LNGTH
****************************************************************************************
   1     4.4   9.5    35.0    0.0     0.0     0.0    0.        0.      1.0  10.5
   2     4.6   9.7    52.0    0.0     0.0     0.0    0.        0.      2.0  23.0
   3     4.4   9.7    55.0    0.0     0.0     0.0    0.        0.      2.0  16.0
   4     4.5   9.7    80.0    0.0     0.0     0.0    0.        0.      3.0  20.0
   5     4.5   9.6    17.3    0.0     0.0     0.0    0.        0.       .5  10.0
   6     4.6   9.5    22.0    0.0     0.0     0.0    0.        0.      2.0   8.0
   7     4.4   9.7    67.0    0.0     0.0     0.0    0.        0.      1.0  10.8
   8     4.5   9.6    52.0    0.0     0.0     0.0    0.        0.      3.5  14.5
   9     4.5   9.6    29.5    0.0     0.0     0.0    0.        0.       .5  14.0
  10     4.4   9.6    36.0    0.0     0.0     0.0    0.        0.      1.0  19.0
  11     4.5   9.7    30.5    0.0     0.0     0.0    0.        0.      6.0  16.0
  12     4.5   9.7    22.5    0.0     0.0     0.0    0.        0.      1.5  16.0
  13     4.6   9.6    47.5    0.0     0.0     0.0    0.        0.      1.0  13.5
  14     4.6   9.5    33.0    0.0     0.0     0.0    0.        0.      1.0   4.0
  15     4.5   9.6    43.0    0.0     0.0     0.0    0.        0.      2.0  19.0
  16     4.5   9.6    27.0    0.0     0.0     0.0    0.        0.      6.0  18.0
  17     4.5   9.6    43.0    0.0     0.0     0.0    0.        0.      0.0   7.0
  18     4.2   9.6    37.5    0.0     0.0     0.0    0.        0.      0.0  13.5
  19     4.3   9.6    24.0    0.0     0.0     0.0    0.        0.       .5   8.0
  20     4.5   9.5    16.5    0.0     0.0     0.0    0.        0.       .5   8.5


    MEAN 4.5   9.6    38.5    0.0     0.0     0.0    0.        0.      1.9  13.5

 STD DEV  .1    .1    16.7    0.0     0.0     0.0    0.        0.      1.7   5.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA HORSECREEK           DATE 25  AUGUST   1981
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD     NEW    NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH   VEG.   SEED
        VEG.  REPR.                              CLASS   PERCENT  TWIG   STALK
                                                                  LNGTH  LNGTH
********************************************************************************
  1     4.0   0.0     7.0    0.0    0.0    0.0    5.      95.     0.0    0.0 DECADENT
  2     4.6   9.7    50.7    0.0    0.0    0.0    5.      60.     0.0   23.5 DECADENT
  3     4.6   9.7    56.0    0.0    0.0    0.0    4.      20.     0.0   14.6
  4     4.6   9.8    86.2    0.0    0.0    0.0    4.      17.     0.0   22.1
  5     4.3   9.5    17.5    0.0    0.0    0.0    4.      75.     0.0   10.2 DECADENT
  6     4.3   9.5    19.6    0.0    0.0    0.0    3.      35.     0.0    3.0
  7     4.6   9.8    70.0    0.0    0.0    0.0    4.      27.     0.0   13.0
  8     4.6   9.7    53.0    0.0    0.0    0.0    0.       0.     0.0   14.5
  9     4.6   9.7    30.1    0.0    0.0    0.0    0.       0.     0.0   16.0 DECADENT
 10     4.4   9.7    38.0    0.0    0.0    0.0    0.       0.     0.0   22.2
 11     4.4   9.4    24.0    0.0    0.0    0.0    0.       0.     0.0    2.8
 12     4.5   9.6    23.8    0.0    0.0    0.0    0.       0.     0.0   17.5
 13     4.5   9.7    47.5    0.0    0.0    0.0    0.       0.     0.0   16.5
 14     4.3   9.5    33.0    0.0    0.0    0.0    0.       0.     0.0    4.6
 15     4.6   9.7    47.0    0.0    0.0    0.0    0.       0.     0.0   13.8
 16     4.6   9.7    26.2    0.0    0.0    0.0    0.       0.     0.0   21.5 DECADENT
 17     4.6   9.5    46.0    0.0    0.0    0.0    0.       0.     0.0    9.5 DECADENT
 18     4.5   9.6    34.0    0.0    0.0    0.0    0.       0.     0.0   13.0 DECADENT
 19     4.5   9.5    19.8    0.0    0.0    0.0    0.       0.     0.0    4.0
 20     4.4   9.5    15.0    0.0    0.0    0.0    0.       0.     0.0   10.0
********************************************************************************

  MEAN  4.5   9.6    37.2    0.0    0.0    0.0    4.      47.     0.0   13.3

STD DEV  .2    .1    19.9    0.0    0.0    0.0    1.      30.     0.0    6.6

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA HORSECREEK   DATE 12 SEPT 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	5.3	10.5	49.0	0.0	0.0	0.0	0.	0.	.5	22.3
2	5.2	0.0	13.5	0.0	0.0	0.0	0.	0.	1.1	0.0
3	5.3	11.5	22.3	0.0	0.0	0.0	0.	0.	.6	17.5
4	5.2	10.9	41.0	0.0	0.0	0.0	0.	0.	.8	11.7
5	5.2	11.0	30.7	0.0	0.0	0.0	0.	0.	.7	15.0
6	5.3	10.8	35.0	0.0	0.0	0.0	0.	0.	2.5	14.5
7	5.3	10.4	22.5	0.0	0.0	0.0	0.	0.	1.0	7.0
8	5.3	11.5	23.0	0.0	0.0	0.0	0.	0.	2.0	20.0
9	5.3	11.0	27.0	0.0	0.0	0.0	0.	0.	3.0	17.6
10	5.2	0.0	5.0	0.0	0.0	0.0	0.	0.	.2	0.0
11	5.3	10.8	65.0	0.0	0.0	0.0	0.	0.	2.0	24.0
12	5.2	0.0	8.0	0.0	0.0	0.0	0.	0.	1.0	0.0
13	5.1	11.0	48.0	0.0	0.0	0.0	0.	0.	1.1	16.8
14	5.3	11.2	35.5	0.0	0.0	0.0	0.	0.	2.0	18.4
15	5.2	10.8	29.5	0.0	0.0	0.0	0.	0.	.4	16.0
16	5.3	11.0	38.5	0.0	0.0	0.0	0.	0.	.5	17.0
17	5.3	11.1	37.0	0.0	0.0	0.0	0.	0.	.6	20.5
18	5.2	11.0	34.2	0.0	0.0	0.0	0.	0.	1.0	16.3
19	5.3	11.4	36.4	0.0	0.0	0.0	0.	0.	1.2	11.4
20	5.3	11.3	31.8	0.0	0.0	0.0	0.	0.	.8	24.0
MEAN	5.3	11.0	31.6	0.0	0.0	0.0	0.	0.	1.2	17.1
STD DEV	.1	.3	14.1	0.0	0.0	0.0	0.	0.	.8	4.5

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA   STUDY AREA MESA ANT.   DATE 02 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.2	0.0	30.0	0.0	0.0	56.0	4.	5.	0.0	0.0
2	3.3	0.0	29.0	0.0	0.0	42.0	4.	3.	0.0	0.0
3	3.3	0.0	30.0	0.0	0.0	77.0	4.	10.	0.0	0.0
4	3.4	0.0	12.0	0.0	0.0	20.0	5.	60.	0.0	0.0
5	3.2	0.0	26.0	58.0	43.0	0.0	4.	6.	0.0	0.0
6	3.3	0.0	25.0	46.0	27.0	0.0	4.	2.	0.0	0.0
7	3.3	0.0	30.0	0.0	0.0	40.0	4.	2.	0.0	0.0
8	3.3	0.0	26.0	0.0	0.0	28.0	4.	5.	0.0	0.0
9	3.3	0.0	26.0	0.0	0.0	40.0	4.	3.	0.0	0.0
10	3.2	0.0	26.0	0.0	0.0	22.0	4.	2.	0.0	0.0
11	3.2	0.0	15.0	20.0	8.0	0.0	3.	10.	0.0	0.0
12	3.4	0.0	25.0	66.0	26.0	0.0	4.	12.	0.0	0.0
13	3.3	0.0	23.0	0.0	0.0	26.0	4.	15.	0.0	0.0
14	3.2	0.0	27.0	63.0	23.0	0.0	5.	65.	0.0	0.0
15	3.2	0.0	13.0	28.0	10.0	0.0	3.	8.	0.0	0.0
16	3.2	0.0	22.0	42.0	16.0	0.0	4.	10.	0.0	0.0
17	3.2	0.0	18.0	0.0	0.0	38.0	4.	45.	0.0	0.0
18	3.3	0.0	18.0	0.0	0.0	22.0	4.	6.	0.0	0.0
19	3.4	0.0	29.0	0.0	0.0	49.0	4.	8.	0.0	0.0
20	3.4	0.0	23.0	28.0	17.0	0.0	4.	8.	0.0	0.0
MEAN	3.3	0.0	23.7	43.9	21.3	38.3	4.	14.	0.0	0.0
STD DEV	.1	0.0	5.7	17.5	11.2	16.7	0.	19.	0.0	0.0

0.0 * NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA MESA ANT.           DATE 26  MAY       1981
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD     NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
**************************************************************************
   1     3.2   9.0   27.2   45.0   52.9   0.0    0.      0.      0.0   0.0
   2     3.2   9.2   23.8   46.8   42.1   0.0    0.      0.      0.0   0.0
   3     3.2   9.0   28.8   33.5   23.0   0.0    0.      0.      0.0   0.0
   4     3.2   9.0   10.1   25.5    6.6   0.0    0.     50.      0.0   0.0 DECADENT
   5     3.1   9.1   31.4   33.1   30.4   0.0    0.      0.      0.0   0.0
   6     3.3   9.1   27.3   47.2   43.9   0.0    0.      0.      0.0   0.0
   7     3.2   9.2   17.8   47.6   33.9   0.0    0.      0.      0.0   0.0
   8     3.1   9.0   25.1   21.0    9.9   0.0    0.      0.      0.0   0.0
   9     3.2   9.1   32.7   47.1   44.2   0.0    0.      0.      0.0   0.0
  10     3.2   9.0   15.5   29.0   22.1   0.0    0.      0.      0.0   0.0
  11     3.1   9.0   10.1   26.8   11.4   0.0    0.     40.      0.0   0.0 DECADENT
  12     3.2   9.1   25.1   32.0    7.9   0.0    0.      0.      0.0   0.0
  13     3.1   9.0   21.1   36.0   22.9   0.0    0.      0.      0.0   0.0
  14     3.1   9.0   18.1   22.1   20.6   0.0    0.     60.      0.0   0.0 DECADENT
  15     3.1   9.0   12.3   20.1   11.6   0.0    0.      0.      0.0   0.0
  16     3.2   9.0   17.9   42.1   24.5   0.0    0.      0.      0.0   0.0
  17     3.1   9.0   11.9   49.4   38.1   0.0    0.     55.      0.0   0.0 DECADENT
  18     3.2   9.0   14.5   38.1   19.4   0.0    0.      0.      0.0   0.0
  19     3.1   9.0   23.4   25.3   24.9   0.0    0.      0.      0.0   0.0
  20     3.1   9.0   17.1   22.0   11.0   0.0    0.      0.      0.0   0.0


    MEAN 3.2   9.0   20.6   34.5   25.2   0.0    0.     51.      0.0   0.0

 STD DEV  .1    .1    7.0   10.3   13.6   0.0    0.      9.      0.0   0.0


  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA MESA ANT.   DATE 5 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE		PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH	
	VEG.	REPR.									
1	3.3	9.1	30.0	0.0	0.0	0.0	3.	5.	0.0	1.5	AGE CLASS
2	3.4	9.2	20.5	0.0	0.0	0.0	0.	0.	0.0	2.3	2.5
3	3.4	9.1	31.0	0.0	0.0	0.0	4.	10.	0.0	2.0	
4	3.4	9.2	11.5	0.0	0.0	0.0	5.	50.	0.0	2.2	
5	3.4	9.2	29.0	0.0	0.0	0.0	0.	30.	0.0	2.1	3.5
6	3.4	9.3	26.5	0.0	0.0	0.0	3.	0.	0.0	2.8	
7	3.3	9.3	24.5	0.0	0.0	0.0	4.	5.	0.0	2.0	
8	3.3	9.2	24.0	0.0	0.0	0.0	4.	5.	0.0	2.0	
9	3.2	9.4	27.5	0.0	0.0	0.0	3.	0.	0.0	2.7	
10	3.3	9.2	21.5	0.0	0.0	0.0	0.	0.	0.0	2.0	3.5
11	3.2	9.1	14.5	0.0	0.0	0.0	2.	0.	0.0	1.3	
12	3.3	9.2	30.5	0.0	0.0	0.0	5.	25.	0.0	2.1	
13	3.3	9.1	21.5	0.0	0.0	0.0	0.	2.	0.0	1.4	3.5
14	3.3	9.2	21.0	0.0	0.0	0.0	5.	60.	0.0	1.2	
15	3.3	9.2	17.0	0.0	0.0	0.0	3.	0.	0.0	1.3	
16	3.3	9.3	20.5	0.0	0.0	0.0	3.	1.	0.0	1.7	
17	3.4	9.4	22.0	0.0	0.0	0.0	5.	65.	0.0	2.0	
18	3.3	9.4	19.5	0.0	0.0	0.0	4.	0.	0.0	2.5	
19	3.3	9.2	23.0	0.0	0.0	0.0	4.	0.	0.0	1.6	
20	3.2	9.1	19.5	0.0	0.0	0.0	5.	50.	0.0	1.0	
MEAN	3.3	9.2	22.8	0.0	0.0	0.0	4.	26.	0.0	1.9	
STD DEV	.1	.1	5.3	0.0	0.0	0.0	1.	25.	0.0	.5	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA STUDY AREA MESA ANT. DATE 16 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.4	9.2	30.0	0.0	0.0	0.0	0.	0.	0.0	3.0
2	3.4	9.2	25.5	0.0	0.0	0.0	0.	0.	0.0	4.1
3	3.4	9.3	33.5	0.0	0.0	0.0	0.	0.	0.0	4.0
4	3.4	9.3	11.7	0.0	0.0	0.0	0.	0.	0.0	5.0
5	3.5	9.3	30.5	0.0	0.0	0.0	0.	0.	0.0	4.6
6	3.5	9.4	32.1	0.0	0.0	0.0	0.	0.	0.0	4.3
7	3.4	9.3	25.5	0.0	0.0	0.0	0.	0.	0.0	2.7
8	3.3	9.2	26.7	0.0	0.0	0.0	0.	0.	0.0	4.6
9	3.3	9.4	31.5	0.0	0.0	0.0	0.	0.	0.0	3.5
10	3.3	9.3	22.5	0.0	0.0	0.0	0.	0.	0.0	3.5
11	3.3	9.2	15.0	0.0	0.0	0.0	0.	0.	0.0	2.5
12	3.4	9.3	30.5	0.0	0.0	0.0	0.	0.	0.0	3.5
13	3.3	9.2	22.5	0.0	0.0	0.0	0.	0.	0.0	2.0
14	3.4	9.2	22.1	0.0	0.0	0.0	0.	0.	0.0	1.9
15	3.4	9.3	17.5	0.0	0.0	0.0	0.	0.	0.0	1.7
16	3.4	9.4	22.0	0.0	0.0	0.0	0.	0.	0.0	4.1
17	3.4	9.3	22.5	0.0	0.0	0.0	0.	0.	0.0	2.5
18	3.4	9.4	20.4	0.0	0.0	0.0	0.	0.	0.0	4.1
19	3.4	9.3	26.5	0.0	0.0	0.0	0.	0.	0.0	3.0
20	3.4	9.2	20.1	0.0	0.0	0.0	0.	0.	0.0	2.1
MEAN	3.4	9.3	24.4	0.0	0.0	0.0	0.	0.	0.0	3.3
STD DEV	.1	.1	5.9	0.0	0.0	0.0	0.	0.	0.0	1.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA MESA ANT.          DATE 30  JUNE    1981
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                               CLASS  PERCENT  TWIG  STALK
                                                                  LNGTH LNGTH
******************************************************************************
   1   3.6   9.4    27.7    0.0    0.0    0.0    3.      10.     0.0   5.5
   2   3.5   9.3    24.6    0.0    0.0    0.0    3.       7.     0.0   3.0
   3   3.6   9.4    36.8    0.0    0.0    0.0    3.      15.     0.0   5.7
   4   3.5   9.3    14.2    0.0    0.0    0.0    4.      50.     0.0   6.0 75% DECADENT
   5   3.6   9.4    33.0    0.0    0.0    0.0    3.       5.     0.0   7.0
   6   3.6   9.4    35.2    0.0    0.0    0.0    3.       7.     0.0   6.8
   7   3.5   9.3    24.7    0.0    0.0    0.0    3.      10.     0.0   6.7
   8   3.3   9.2    25.0    0.0    0.0    0.0    3.      10.     0.0   3.5
   9   3.4   9.4    29.4    0.0    0.0    0.0    3.       5.     0.0   5.5
  10   3.3   9.3    22.1    0.0    0.0    0.0    3.      12.     0.0   3.6
  11   3.2   9.2    15.9    0.0    0.0    0.0    2.       8.     0.0   0.0
  12   3.4   9.3    27.3    0.0    0.0    0.0    3.      30.     0.0   4.7 30% DECADENT
  13   3.3   9.2    29.8    0.0    0.0    0.0    3.       6.     0.0   4.5
  14   3.4   9.2    24.7    0.0    0.0    0.0    4.      60.     0.0   2.7
  15   3.3   9.3    14.9    0.0    0.0    0.0    3.      20.     0.0   0.0
  16   3.4   9.4    20.8    0.0    0.0    0.0    3.      17.     0.0   5.1
  17   3.3   9.3    21.0    0.0    0.0    0.0    4.      60.     0.0   0.0 60% DECADENT
  18   3.5   9.4    20.7    0.0    0.0    0.0    3.      12.     0.0   3.8
  19   3.6   9.3     0.0    0.0    0.0    0.0    4.       3.     0.0   0.0
  20   3.4   9.2     0.0    0.0    0.0    0.0    4.      50.     0.0   0.0 50% DECADENT


  MEAN 3.4   9.3    24.9    0.0    0.0    0.0    3.      20.     0.0   4.9

STD DEV  .1   .1     6.5    0.0    0.0    0.0    1.      19.     0.0   1.4

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA MESA ANT.   DATE 14 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.1	0.0	22.5	0.0	0.0	0.0	0.	0.	0.0	0.0
2	4.1	9.6	22.0	0.0	0.0	0.0	0.	0.	0.0	2.0
3	4.1	9.6	35.0	0.0	0.0	0.0	0.	0.	0.0	4.5
4	4.1	0.0	10.0	0.0	0.0	0.0	0.	0.	0.0	0.0
5	4.3	9.6	30.0	0.0	0.0	0.0	0.	0.	0.0	1.0
6	4.6	9.6	34.0	0.0	0.0	0.0	0.	0.	0.0	6.0
7	4.5	9.6	26.0	0.0	0.0	0.0	0.	0.	0.0	7.0
8	4.2	0.0	24.0	0.0	0.0	0.0	0.	0.	0.0	0.0
9	4.5	9.6	27.0	0.0	0.0	0.0	0.	0.	0.0	3.0
10	4.2	0.0	22.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	4.5	0.0	14.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	4.9	9.6	30.0	0.0	0.0	0.0	0.	0.	0.0	6.0
13	4.6	0.0	20.0	0.0	0.0	0.0	0.	0.	0.0	0.0
14	4.2	0.0	20.0	0.0	0.0	0.0	0.	0.	0.0	0.0
15	4.0	0.0	11.5	0.0	0.0	0.0	0.	0.	0.0	0.0
16	4.2	9.6	20.0	0.0	0.0	0.0	0.	0.	0.0	4.0
17	4.1	0.0	18.0	0.0	0.0	0.0	0.	0.	0.0	0.0
18	4.1	0.0	18.0	0.0	0.0	0.0	0.	0.	0.0	0.0
19	4.4	0.0	24.0	0.0	0.0	0.0	0.	0.	0.0	0.0
20	4.3	0.0	20.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	4.3	9.6	22.4	0.0	0.0	0.0	0.	0.	0.0	4.2
STD DEV	.2	.0	6.7	0.0	0.0	0.0	0.	0.	0.0	2.1

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA MESA ANT.              DATE 28  JULY    1981
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 PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD     NEW   NEW
  NO.  STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH    VEG.  SEED
        VEG.  REPR.                               CLASS  PERCENT   TWIG  STALK
                                                                   LNGTH LNGTH
*****************************************************************************
    1    4.4   0.0     27.0   0.0    0.0    0.0    0.       0.      1.5   0.0
    2    4.4   9.5     27.5   0.0    0.0    0.0    0.       0.      2.0   5.0
    3    4.3   9.6     33.0   0.0    0.0    0.0    0.       0.      1.5   6.0
    4    4.3   9.5     10.0   0.0    0.0    0.0    0.       0.      2.3   5.5
    5    4.2   0.0     14.0   0.0    0.0    0.0    0.       0.       .5   0.0
    6    4.5   9.8     34.5   0.0    0.0    0.0    0.       0.      2.0   7.4
    7    4.3   9.6     22.5   0.0    0.0    0.0    0.       0.      1.0   4.8
    8    4.2   0.0     23.5   0.0    0.0    0.0    0.       0.      0.0   0.0
    9    4.4   9.6     31.0   0.0    0.0    0.0    0.       0.      1.0   6.0
   10    4.3   0.0     22.0   0.0    0.0    0.0    0.       0.       .5   0.0
   11    4.3   0.0     15.0   0.0    0.0    0.0    0.       0.       .5   0.0
   12    4.4   9.6     30.0   0.0    0.0    0.0    0.       0.      1.9   7.4
   13    4.2   0.0     23.5   0.0    0.0    0.0    0.       0.      0.0   0.0
   14    4.2   0.0     25.0   0.0    0.0    0.0    0.       0.      0.0   0.0
   15    4.3   0.0     13.0   0.0    0.0    0.0    0.       0.       .5   0.0
   16    4.3   9.6     21.5   0.0    0.0    0.0    0.       0.       .5   4.5
   17    4.3   0.0     19.0   0.0    0.0    0.0    0.       0.      1.0   0.0
   18    4.4   0.0     19.0   0.0    0.0    0.0    0.       0.      1.5   0.0
   19    4.4   0.0     27.0   0.0    0.0    0.0    0.       0.      2.0   0.0
   20    4.3   0.0     20.0   0.0    0.0    0.0    0.       0.      1.8   0.0


   MEAN  4.3   9.6     22.9   0.0    0.0    0.0    0.       0.      1.3   5.8

 STD DEV  .1    .1      6.7   0.0    0.0    0.0    0.       0.       .6   1.1

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA MESA ANT.          DATE 11  AUGUST   1981
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 PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                               CLASS  PERCENT  TWIG  STALK
                                                                  LNGTH LNGTH
****************************************************************************
   1    4.8   0.0     26.0    0.0    0.0    0.0    0.       0.     3.0   0.0
   2    4.7   9.7     24.0    0.0    0.0    0.0    0.       0.     2.0   5.0
   3    4.7   9.7     33.5    0.0    0.0    0.0    0.       0.     2.0   5.0
   4    4.7   0.0     13.0    0.0    0.0    0.0    0.       0.     1.5   0.0
   5    4.7   9.8     31.0    0.0    0.0    0.0    0.       0.     2.0   4.0
   6    4.8   9.9     30.5    0.0    0.0    0.0    0.       0.     3.5   5.5
   7    4.6   9.9     24.0    0.0    0.0    0.0    0.       0.     1.0   5.5
   8    4.5   9.6     27.0    0.0    0.0    0.0    0.       0.     2.0   4.5
   9    4.7   9.6     29.5    0.0    0.0    0.0    0.       0.     2.0   6.0
  10    4.6   9.9     23.0    0.0    0.0    0.0    0.       0.     1.0   3.0
  11    4.7   0.0     15.0    0.0    0.0    0.0    0.       0.     1.5   0.0
  12    4.9   0.0     28.0    0.0    0.0    0.0    0.       0.     3.5   0.0
  13    4.6   0.0     20.5    0.0    0.0    0.0    0.       0.     1.0   0.0
  14    4.6   0.0     29.0    0.0    0.0    0.0    0.       0.     1.0   0.0
  15    4.7   0.0     16.0    0.0    0.0    0.0    0.       0.     1.0   0.0
  16    4.8   9.5     20.0    0.0    0.0    0.0    0.       0.     1.0   3.5
  17    5.0   0.0     24.0    0.0    0.0    0.0    0.       0.     6.0   0.0
  18    4.9   0.0     22.5    0.0    0.0    0.0    0.       0.     4.5   0.0
  19    4.8   0.0     28.0    0.0    0.0    0.0    0.       0.     2.0   0.0
  20    4.7   0.0     19.0    0.0    0.0    0.0    0.       0.     1.5   0.0


   MEAN 4.7   9.7     24.2    0.0    0.0    0.0    0.       0.     2.2   4.7

 STD DEV .1    .2      5.6    0.0    0.0    0.0    0.       0.     1.3   1.0


  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA STUDY AREA MESA ANT. DATE 24 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	PHENOLOGICAL SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.8	0.0	24.5	0.0	0.0	0.0	0.	0.	1.5	0.0
2	4.8	9.8	25.0	0.0	0.0	0.0	0.	0.	1.0	4.5
3	4.8	9.6	31.0	0.0	0.0	0.0	0.	0.	2.0	4.5
4	4.7	0.0	10.5	0.0	0.0	0.0	0.	0.	.5	0.0
5	4.8	9.9	30.5	0.0	0.0	0.0	0.	0.	2.0	4.0
6	5.0	9.9	30.0	0.0	0.0	0.0	0.	0.	3.5	7.0
7	5.0	9.9	24.0	0.0	0.0	0.0	0.	0.	3.5	5.0
8	4.9	9.9	28.0	0.0	0.0	0.0	0.	0.	4.0	4.0
9	4.6	0.0	29.0	0.0	0.0	0.0	0.	0.	2.0	0.0
10	4.7	0.0	23.0	0.0	0.0	0.0	0.	0.	1.0	0.0
11	4.7	0.0	17.0	0.0	0.0	0.0	0.	0.	.5	0.0
12	4.8	0.0	29.0	0.0	0.0	0.0	0.	0.	1.5	0.0
13	4.7	0.0	23.0	0.0	0.0	0.0	0.	0.	.5	0.0
14	4.5	0.0	22.5	0.0	0.0	0.0	0.	0.	.2	0.0
15	4.5	0.0	12.5	0.0	0.0	0.0	0.	0.	.1	0.0
16	4.7	0.0	21.0	0.0	0.0	0.0	0.	0.	.5	0.0
17	4.7	0.0	19.5	0.0	0.0	0.0	0.	0.	1.0	0.0
18	4.8	0.0	20.0	0.0	0.0	0.0	0.	0.	2.0	0.0
19	4.6	0.0	27.0	0.0	0.0	0.0	0.	0.	.5	0.0
20	4.7	0.0	18.0	0.0	0.0	0.0	0.	0.	1.0	0.0
MEAN	4.8	9.8	23.3	0.0	0.0	0.0	0.	0.	1.4	4.8
STD DEV	.1	.1	5.8	0.0	0.0	0.0	0.	0.	1.1	1.1

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA   STUDY AREA MESA ANT.   DATE 12 SEPT 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.9	0.0	25.5	0.0	0.0	0.0	0.	0.	1.5	0.0
2	5.0	0.0	26.0	0.0	0.0	0.0	0.	0.	2.0	0.0
3	4.9	0.0	30.0	0.0	0.0	0.0	0.	0.	3.0	0.0
4	4.9	0.0	10.0	0.0	0.0	0.0	0.	0.	2.5	0.0
5	5.0	0.0	13.0	-0.0	0.0	0.0	0.	0.	.5	0.0
6	4.9	11.0	31.0	0.0	0.0	0.0	0.	0.	4.0	6.2
7	5.0	11.5	22.8	0.0	0.0	0.0	0.	0.	2.0	4.9
8	5.0	0.0	22.5	0.0	0.0	0.0	0.	0.	.5	0.0
9	4.9	0.0	30.5	0.0	0.0	0.0	0.	0.	2.0	0.0
10	5.0	0.0	19.0	0.0	0.0	0.0	0.	0.	.5	0.0
11	5.0	0.0	16.5	0.0	0.0	0.0	0.	0.	1.0	0.0
12	4.9	0.0	32.0	0.0	0.0	0.0	0.	0.	1.0	0.0
13	4.9	0.0	22.5	0.0	0.0	0.0	0.	0.	.5	0.0
14	5.0	0.0	23.5	0.0	0.0	0.0	0.	0.	.5	0.0
15	5.2	0.0	12.5	0.0	0.0	0.0	0.	0.	.5	0.0
16	4.9	0.0	22.5	0.0	0.0	0.0	0.	0.	1.5	0.0
17	5.2	0.0	19.5	0.0	0.0	0.0	0.	0.	.5	0.0
18	5.0	0.0	21.0	0.0	0.0	0.0	0.	0.	1.5	0.0
19	4.9	0.0	28.5	0.0	0.0	0.0	0.	0.	1.5	0.0
20	5.0	0.0	21.0	0.0	0.0	0.0	0.	0.	.8	0.0
MEAN	5.0	11.3	22.5	0.0	0.0	0.0	0.	0.	1.4	5.6
STD DEV	.1	.4	6.3	0.0	0.0	0.0	0.	0.	1.0	.9

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA STUDY AREA OWL DRAW DATE 1 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.3	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
2	3.2	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	3.2	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	3.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
5	3.2	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
6	3.2	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
7	3.3	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
8	3.2	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
9	3.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
10	3.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	3.2	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	3.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	3.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
14	3.2	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
15	3.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
16	3.2	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
17	3.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
18	3.2	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
19	3.3	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
20	3.3	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	3.2	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
STD DEV	.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA OWL DRAW             DATE 25  MAY       1981
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PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
       VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                LNGTH LNGTH
****************************************************************************
  1     3.4   9.1   62.0   0.0    0.0    0.0    0.       0.     0.0   0.0
  2     3.4   9.0   48.0   0.0    0.0    0.0    0.       0.     0.0   0.0
  3     3.3   9.1   28.0   0.0    0.0    0.0    **       0.     0.0   0.0 DECADENT
  4     3.3   9.1    8.0   0.0    0.0    0.0    0.       0.     0.0   0.0
  5     3.3   9.1   22.0   0.0    0.0    0.0    0.       0.     0.0   0.0
  6     3.3   9.1   29.0   0.0    0.0    0.0    0.       0.     0.0   0.0
  7     3.3   9.0   14.0   0.0    0.0    0.0    0.       0.     0.0   0.0
  8     3.3   9.0   21.0   0.0    0.0    0.0    0.       0.     0.0   0.0
  9     3.3   9.1   50.0   0.0    0.0    0.0    0.       0.     0.0   0.0
 10     3.3   9.0    9.0   0.0    0.0    0.0    0.       0.     0.0   0.0
 11     3.3   9.1   61.0   0.0    0.0    0.0    0.       0.     0.0   0.0
 12     3.4   9.1   61.0   0.0    0.0    0.0    0.       0.     0.0   0.0
 13     3.4   9.1   10.0   0.0    0.0    0.0    0.       0.     0.0   0.0
 14     3.3   9.1   55.0   0.0    0.0    0.0    0.       0.     0.0   0.0
 15     3.4   9.1   30.1   0.0    0.0    0.0    **       0.     0.0   0.0 DECADENT
 16     3.3   9.1   11.0   0.0    0.0    0.0    0.       0.     0.0   0.0
 17     3.2   9.0    7.0   0.0    0.0    0.0    0.       0.     0.0   0.0
 18     3.3   9.1   17.0   0.0    0.0    0.0    0.       0.     0.0   0.0
 19     3.2   9.0    5.0   0.0    0.0    0.0    0.       0.     0.0   0.0
 20     3.3   9.0   32.0   0.0    0.0    0.0    0.       0.     0.0   0.0

  MEAN  3.3   9.1   29.0   0.0    0.0    0.0    **       0.     0.0   0.0

STD DEV  .1    .0   20.1   0.0    0.0    0.0    **       0.     0.0   0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA OWL DRAW            DATE  6  JUNE    1981
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT  DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE   BRANCH   VEG.  SEED
       VEG.  REPR.                               CLASS PERCENT  TWIG  STALK
                                                                LNGTH LNGTH
*************************************************************************
   1    3.5   9.4    63.0    0.0    0.0    0.0    4.     2.     0.0   0.0 AGE 4.5
   2    3.5   9.2    50.2    0.0    0.0    0.0    4.     4.     0.0   0.0 AGE 4.6
   3    3.4   9.3    23.0    0.0    0.0    0.0    4.    35.     0.0   0.0 AGE 4.5
   4    3.4   9.1     9.8    0.0    0.0    0.0    4.    40.     0.0   0.0 AGE 4.3
   5    3.4   9.2    22.0    0.0    0.0    0.0    4.    10.     0.0   0.0 AGE 4.5
   6    3.4   9.3    37.5    0.0    0.0    0.0    4.    15.     0.0   0.0 AGE 4.6
   7    3.4   9.1    14.8    0.0    0.0    0.0    4.     0.     0.0   0.0 AGE 4.0
   8    3.4   9.1    21.2    0.0    0.0    0.0    4.    40.     0.0   0.0 AGE 4.7
   9    3.5   9.4    55.0    0.0    0.0    0.0    4.     2.     0.0   0.0 AGE 4.5
  10    3.4   9.2    12.4    0.0    0.0    0.0    3.     5.     0.0   0.0 AGE 3.5
  11    3.4   9.2    65.0    0.0    0.0    0.0    4.     2.     0.0   0.0 AGE 4.2
  12    3.5   9.3    69.0    0.0    0.0    0.0    4.    12.     0.0   0.0 AGE 4.2
  13    3.4   9.2    11.0    0.0    0.0    0.0    3.     2.     0.0   0.0 AGE 3.8
  14    3.5   9.4    60.1    0.0    0.0    0.0    4.     3.     0.0   0.0 AGE 4.3
  15    3.5   9.2    33.0    0.0    0.0    0.0    4.    55.     0.0   0.0 AGE 4.5
  16    3.3   9.3    14.0    0.0    0.0    0.0    2.     1.     0.0   0.0 AGE 2.9
  17    3.2   9.0     7.0    0.0    0.0    0.0    2.     1.     0.0   0.0 AGE 2.0
  18    3.3   9.1    19.2    0.0    0.0    0.0    3.    10.     0.0   0.0 AGE 3.8
  19    3.2   9.0     5.4    0.0    0.0    0.0    2.     3.     0.0   0.0 AGE 2.0
  20    3.4   9.2    30.0    0.0    0.0    0.0    4.    23.     0.0   0.0 AGE 4.0


   MEAN 3.4   9.2    31.1    0.0    0.0    0.0    4.    14.     0.0   0.0

 STD DEV .1    .1    21.5    0.0    0.0    0.0    1.    17.     0.0   0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA OWL DRAW           DATE 15  JUNE      1981
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PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD     NEW   NEW
NO.    STAGE SCORE  HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.   SEED
        VEG.  REPR.                             CLASS  PERCENT  TWIG   STALK
                                                                LNGTH  LNGTH
*****************************************************************************
   1    3.5   9.5   54.0   0.0    0.0    0.0    0.      0.      0.0    8.5
   2    3.5   9.5   49.0   0.0    0.0    0.0    0.      0.      0.0    4.5
   3    3.4   9.5   31.0   0.0    0.0    0.0    0.      0.      0.0    7.0
   4    3.4   9.2    9.0   0.0    0.0    0.0    0.      0.      0.0    3.5
   5    3.4   9.2   20.6   0.0    0.0    0.0    0.      0.      0.0    3.0
   6    3.5   9.6   35.2   0.0    0.0    0.0    0.      0.      0.0    6.5
   7    3.4   9.1   14.1   0.0    0.0    0.0    0.      0.      0.0    2.5
   8    3.4   9.1   24.5   0.0    0.0    0.0    0.      0.      0.0    2.0
   9    3.5   9.6   54.2   0.0    0.0    0.0    0.      0.      0.0    8.6
  10    3.4   9.5   15.4   0.0    0.0    0.0    0.      0.      0.0    8.7
  11    3.5   9.4   65.8   0.0    0.0    0.0    0.      0.      0.0    6.5
  12    3.5   9.5   86.0   0.0    0.0    0.0    0.      0.      0.0    9.5
  13    3.4   9.1   12.5   0.0    0.0    0.0    0.      0.      0.0    2.5
  14    3.5   9.6   50.0   0.0    0.0    0.0    0.      0.      0.0    9.0
  15    3.5   9.2   20.4   0.0    0.0    0.0    0.      0.      0.0    6.2
  16    3.4   9.2   12.0   0.0    0.0    0.0    0.      0.      0.0    5.5
  17    3.3   9.1    6.8   0.0    0.0    0.0    0.      0.      0.0    2.5 NEW PLANT
  18    3.4   9.1   18.5   0.0    0.0    0.0    0.      0.      0.0    2.5
  19    3.4   0.0    6.0   0.0    0.0    0.0    0.      0.      0.0    0.0
  20    3.4   9.6   31.0   0.0    0.0    0.0    0.      0.      0.0    4.0


   MEAN 3.4   9.3   30.8   0.0    0.0    0.0    0.      0.      0.0    5.4

STD DEV  .1    .2   22.2   0.0    0.0    0.0    0.      0.      0.0    2.6


  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA OWL DRAW            DATE 28  JUNE     1981
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
       VEG.  REPR.                               CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
****************************************************************************
   1     4.1   9.7   62.0    0.0    0.0    0.0    0.      0.     0.0   9.5
   2     4.0   9.5   46.0    0.0    0.0    0.0    0.      0.     0.0   6.0
   3     4.6   9.8   34.0    0.0    0.0    0.0    0.      0.     0.0  10.0
   4     4.0   0.0    7.0    0.0    0.0    0.0    0.      0.     0.0   0.0 DECADENT
   5     4.1   9.4   19.0    0.0    0.0    0.0    0.      0.     0.0   4.0
   6     4.3   9.5   33.0    0.0    0.0    0.0    0.      0.     0.0   7.0
   7     4.0   0.0   15.0    0.0    0.0    0.0    0.      0.     0.0   0.0
   8     4.0   0.0   28.0    0.0    0.0    0.0    0.      0.     0.0   0.0
   9     4.5   9.4   53.0    0.0    0.0    0.0    0.      0.     0.0   9.0
  10     4.0   9.1   15.5    0.0    0.0    0.0    0.      0.     0.0   9.0
  11     4.6   9.6   65.0    0.0    0.0    0.0    0.      0.     0.0   9.0
  12     4.8   9.7   65.0    0.0    0.0    0.0    0.      0.     0.0  11.0
  13     4.0   0.0   11.0    0.0    0.0    0.0    0.      0.     0.0  12.0
  14     4.5   9.8   54.0    0.0    0.0    0.0    0.      0.     0.0   6.0
  15     4.4   9.1   31.0    0.0    0.0    0.0    0.      0.     0.0   0.0
  16     4.2   0.0   12.0    0.0    0.0    0.0    0.      0.     0.0   0.0
  17     4.1   0.0    6.0    0.0    0.0    0.0    0.      0.     0.0   0.0
  18     4.2   0.0    9.0    0.0    0.0    0.0    0.      0.     0.0   0.0
  19     4.0   0.0    6.0    0.0    0.0    0.0    0.      0.     0.0   0.0
  20     4.1   9.6   34.0    0.0    0.0    0.0    0.      0.     0.0   6.0

    MEAN 4.2   9.5   30.3    0.0    0.0    0.0    0.      0.     0.0   8.2

 STD DEV  .3    .2   20.8    0.0    0.0    0.0    0.      0.     0.0   2.4

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA OWL DRAW              DATE 13  JULY    1981
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 PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW    NEW
 NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE      BRANCH   VEG.   SEED
         VEG.  REPR.                                  CLASS    PERCENT  TWIG   STALK
                                                                        LNGTH  LNGTH
*************************************************************************************
    1    4.2   9.5    0.0     0.0     0.0     0.0     4.        1.      0.0   11.6
    2    4.2   9.5    0.0     0.0     0.0     0.0     4.        3.      0.0    6.0
    3    4.2   9.5    0.0     0.0     0.0     0.0     4.       10.      0.0   12.7
    4    4.2   9.5    0.0     0.0     0.0     0.0     2.       15.      0.0    0.0
    5    4.2   9.4    0.0     0.0     0.0     0.0     3.        7.      0.0    5.0
    6    4.2   9.5    0.0     0.0     0.0     0.0     3.       10.      0.0   10.5
    7    4.1   9.5    0.0     0.0     0.0     0.0     2.       50.      0.0    0.0
    8    4.1   9.5    0.0     0.0     0.0     0.0     4.       12.      0.0    0.0
    9    4.1   9.5    0.0     0.0     0.0     0.0     4.        2.      0.0   12.6
   10    4.1   9.5    0.0     0.0     0.0     0.0     2.       10.      0.0    0.0
   11    4.2   9.5    0.0     0.0     0.0     0.0     4.        5.      0.0   11.6
   12    4.5   9.5    0.0     0.0     0.0     0.0     4.        7.      0.0   11.9
   13    4.1   9.5    0.0     0.0     0.0     0.0     3.       30.      0.0    0.0
   14    4.2   9.6    0.0     0.0     0.0     0.0     4.        3.      0.0   13.0
   15    4.2   9.5    0.0     0.0     0.0     0.0     5.       90.      0.0    0.0
   16    4.2   9.5    0.0     0.0     0.0     0.0     3.       40.      0.0    0.0
   17    4.2   9.5    0.0     0.0     0.0     0.0     3.       10.      0.0    0.0
   18    4.1   9.5    0.0     0.0     0.0     0.0     3.       10.      0.0    0.0
   19    4.0   9.5    0.0     0.0     0.0     0.0     2.        2.      0.0    0.0
   20    0.0   0.0    0.0     0.0     0.0     0.0     5.       99.      0.0    0.0


   MEAN  4.2   9.5    0.0     0.0     0.0     0.0     3.       21.      0.0   10.5

 STD DEV  .1    .0    0.0     0.0     0.0     0.0     1.       28.      0.0    3.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
 ARTEMISIA TRIDENTATA   STUDY AREA OWL DRAW           DATE 27  JULY    1981
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  PLANT PHENOLOGICAL  PLANT   PLANT   PLANT   PLANT   PLANT   DEAD     NEW    NEW
  NO.   STAGE SCORE   HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH   VEG.   SEED
         VEG.  REPR.                                  CLASS   PERCENT  TWIG   STALK
                                                                       LNGTH  LNGTH
*******************************************************************************************
   1     4.7   9.8    60.0    0.0     0.0     0.0     4.        6.     1.2    0.0
   2     4.3   9.5    47.1    0.0     0.0     0.0     5.       30.     1.0    0.0 DECADENT
   3     4.6   9.8    27.2    0.0     0.0     0.0     5.       50.      .9    0.0 DECADENT
   4     4.0   9.3     8.9    0.0     0.0     0.0     2.       10.      .6    0.0
   5     4.6   9.4    18.7    0.0     0.0     0.0     3.       12.      .7    0.0
   6     4.3   9.5    26.0    0.0     0.0     0.0     4.       20.     1.0    0.0
   7     4.0   9.3    13.5    0.0     0.0     0.0     2.       15.      .5    0.0
   8     4.2   9.3    20.5    0.0     0.0     0.0     3.       10.      .6    0.0
   9     4.6   9.5    55.2    0.0     0.0     0.0     4.        3.      .7    0.0
  10     4.0   9.2     8.9    0.0     0.0     0.0     2.       20.      .4    0.0
  11     4.6   9.8    68.4    0.0     0.0     0.0     4.       10.     1.2    0.0
  12     4.8   9.8    84.0    0.0     0.0     0.0     5.        7.     1.5    0.0
  13     4.0   9.2    10.0    0.0     0.0     0.0     2.       15.      .4    0.0
  14     4.7   9.8    60.4    0.0     0.0     0.0     4.        3.     1.0    0.0
  15     4.4   9.5    29.9    0.0     0.0     0.0     5.       60.      .7    0.0 DECADENT
  16     4.2   9.3    12.7    0.0     0.0     0.0     2.       10.      .5    0.0
  17     4.1   9.2     8.0    0.0     0.0     0.0     2.        5.      .3    0.0
  18     4.6   9.7    53.6    0.0     0.0     0.0     4.        2.      .9    0.0
  19     4.0   9.3     5.0    0.0     0.0     0.0     2.       50.      .2    0.0
  20     4.2   9.6    29.8    0.0     0.0     0.0     5.       60.     0.0    0.0 DECADENT
*******************************************************************************************

   MEAN  4.3   9.5    32.4    0.0     0.0     0.0     3.       20.      .8    0.0

STD DEV   .3    .2    23.8    0.0     0.0     0.0     1.       19.      .3    0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA OWL DRAW              DATE 10  AUGUST   1981
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PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
NO.    STAGE SCORE  HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
       VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                LNGTH LNGTH
************************************************************************************
   1     4.5   9.7   63.0   0.0    0.0    0.0   0.      0.      2.0  10.5
   2     4.4   9.6   46.5   0.0    0.0    0.0   0.      0.       .5   5.5
   3     4.4   9.6   36.0   0.0    0.0    0.0   0.      0.      1.0  11.0
   4     4.4   9.4   10.0   0.0    0.0    0.0   0.      0.      1.5   2.0
   5     4.2   9.4   21.0   0.0    0.0    0.0   0.      0.      0.0   3.0
   6     4.2   9.6   35.0   0.0    0.0    0.0   0.      0.      0.0  10.0
   7     4.4   0.0   14.0   0.0    0.0    0.0   0.      0.       .5   0.0
   8     4.2   9.4   14.0   0.0    0.0    0.0   0.      0.      0.0   1.0
   9     4.3   9.6   53.5   0.0    0.0    0.0   0.      0.       .5   9.5
  10     4.2   9.5   16.5   0.0    0.0    0.0   0.      0.      0.0   9.5
  11     4.3   9.6   63.0   0.0    0.0    0.0   0.      0.      0.0   8.5
  12     4.3   9.7   77.0   0.0    0.0    0.0   0.      0.      1.0  12.0
  13     4.4   0.0    8.0   0.0    0.0    0.0   0.      0.      2.0   0.0
  14     4.4   9.7   64.0   0.0    0.0    0.0   0.      0.      1.5  13.0
  15     4.2   9.4   20.0   0.0    0.0    0.0   0.      0.      0.0   6.0
  16     4.3   9.4   14.0   0.0    0.0    0.0   0.      0.       .5   6.0
  17     4.3   0.0    6.0   0.0    0.0    0.0   0.      0.      1.0   0.0
  18     4.3   0.0   18.0   0.0    0.0    0.0   0.      0.       .5   0.0
  19     4.2   0.0    6.0   0.0    0.0    0.0   0.      0.      0.0   0.0
  20     4.2   9.5   28.0   0.0    0.0    0.0   0.      0.      0.0   6.0


   MEAN  4.3   9.5   30.7   0.0    0.0    0.0   0.      0.      1.0   7.6

STD DEV   .1    .1   22.6   0.0    0.0    0.0   0.      0.       .6   3.7


 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA OWL DRAW              DATE 24  AUGUST   1981
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 PLANT PHENOLOGICAL    PLANT   PLANT   PLANT   PLANT   PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE     HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH  VEG.  SEED
        VEG.  REPR.                                    CLASS   PERCENT TWIG  STALK
                                                                       LNGTH LNGTH
***************************************************************************************
   1    4.6   9.8      75.5    0.0     0.0     0.0     4.        2.    0.0   8.0
   2    4.6   9.8      52.0    0.0     0.0     0.0     4.       10.    0.0   6.0
   3    4.6   9.8      29.2    0.0     0.0     0.0     4.       40.    0.0   5.5 DECADENT
   4    4.3   9.4       9.3    0.0     0.0     0.0     3.       50.    0.0   3.6 DECADENT
   5    4.4   9.4      22.0    0.0     0.0     0.0     3.       20.    0.0   2.9
   6    4.5   9.5      35.7    0.0     0.0     0.0     4.       30.    0.0   6.3
   7    4.4   9.4      15.1    0.0     0.0     0.0     3.       50.    0.0   3.0
   8    4.4   9.4      23.2    0.0     0.0     0.0     3.       15.    0.0   2.0
   9    4.6   9.5      54.0    0.0     0.0     0.0     4.        5.    0.0   5.1
  10    4.3   9.4      12.7    0.0     0.0     0.0     3.       20.    0.0   6.0
  11    4.6   9.6      64.3    0.0     0.0     0.0     4.        5.    0.0   6.2
  12    4.6   9.7      72.5    0.0     0.0     0.0     4.        7.    0.0   8.1
  13    4.2   9.3      11.4    0.0     0.0     0.0     2.       60.    0.0   3.2
  14    4.6   9.8      69.1    0.0     0.0     0.0     4.        2.    0.0   8.3
  15    4.3   9.4      20.9    0.0     0.0     0.0     4.       75.    0.0   5.3 DECADENT
  16    4.4   9.4      14.2    0.0     0.0     0.0     3.       40.    0.0   5.4
  17    4.1   9.4       6.5    0.0     0.0     0.0     3.       20.    0.0   4.8
  18    4.2   9.4      19.9    0.0     0.0     0.0     3.       30.    0.0   3.7
  19    4.1   9.3       4.8    0.0     0.0     0.0     3.       50.    0.0   1.9
  20    4.4   9.6      25.0    0.0     0.0     0.0     4.       50.    0.0   6.1 DECADENT

   MEAN 4.4   9.5      31.9    0.0     0.0     0.0     3.       29.    0.0   5.1

 STD DEV .2    .2      23.7    0.0     0.0     0.0     1.       22.    0.0   1.9

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA OWL DRAW   DATE 11 SEPT 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.6	12.3	59.5	0.0	0.0	0.0	0.	0.	2.5	7.3
2	4.8	12.5	50.0	0.0	0.0	0.0	0.	0.	1.5	6.0
3	4.9	12.6	25.0	0.0	0.0	0.0	0.	0.	4.0	14.0
4	4.8	0.0	8.5	0.0	0.0	0.0	0.	0.	2.0	0.0
5	4.7	0.0	17.0	0.0	0.0	0.0	0.	0.	3.5	0.0
6	4.9	12.7	36.0	0.0	0.0	0.0	0.	0.	2.8	7.2
7	4.9	0.0	13.7	0.0	0.0	0.0	0.	0.	1.0	0.0
8	4.9	0.0	19.5	0.0	0.0	0.0	0.	0.	1.3	0.0
9	4.6	12.5	47.5	0.0	0.0	0.0	0.	0.	3.2	12.4
10	4.7	0.0	8.5	0.0	0.0	0.0	0.	0.	1.0	0.0
11	4.9	13.0	65.5	0.0	0.0	0.0	0.	0.	4.3	10.5
12	4.9	12.9	82.0	0.0	0.0	0.0	0.	0.	4.8	14.3
13	4.8	0.0	10.0	0.0	0.0	0.0	0.	0.	1.0	0.0
14	4.9	13.0	67.0	0.0	0.0	0.0	0.	0.	3.8	14.7
15	4.9	0.0	20.0	0.0	0.0	0.0	0.	0.	2.8	0.0
16	4.8	0.0	12.0	0.0	0.0	0.0	0.	0.	3.4	0.0
17	4.8	0.0	6.0	0.0	0.0	0.0	0.	0.	2.0	0.0
18	4.9	0.0	17.5	0.0	0.0	0.0	0.	0.	1.0	0.0
19	4.9	0.0	5.0	0.0	0.0	0.0	0.	0.	.5	0.0
20	4.9	13.0	33.6	0.0	0.0	0.0	0.	0.	1.8	6.7
MEAN	4.8	12.7	30.2	0.0	0.0	0.0	0.	0.	2.4	10.3
STD DEV	.1	.3	23.7	0.0	0.0	0.0	0.	0.	1.3	3.6

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMESIA TREDENTATA   STUDY AREA RED WASH   DATE 01 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.0	0.0	34.0	0.0	0.0	58.0	4.	2.	0.0	4.0
2	2.8	0.0	42.0	63.8	50.0	0.0	5.	94.	0.0	.2
3	3.3	0.0	58.0	0.0	0.0	104.0	4.	3.	0.0	2.5
4	3.2	0.0	32.0	0.0	0.0	9.0	4.	20.	0.0	2.0
5	3.3	0.0	32.0	0.0	0.0	29.0	3.	5.	0.0	1.5
6	3.2	0.0	28.0	0.0	0.0	41.0	3.	3.	0.0	6.0
7	3.3	0.0	38.0	90.0	73.0	0.0	4.	2.	0.0	4.5
8	3.2	0.0	34.0	65.0	26.0	0.0	4.	28.	0.0	3.5
9	3.3	0.0	37.0	150.0	110.0	0.0	4.	3.	0.0	2.5
10	3.1	0.0	35.0	70.0	50.0	0.0	4.	5.	0.0	1.5
11	3.2	0.0	16.0	25.0	12.0	0.0	4.	25.	0.0	1.0
12	3.2	0.0	32.0	0.0	0.0	80.0	4.	2.	0.0	2.0
13	3.2	0.0	8.0	19.0	10.0	0.0	3.	1.	0.0	1.0
14	3.3	0.0	28.0	0.0	0.0	56.0	4.	0.	0.0	2.3
15	3.2	0.0	14.0	19.0	10.0	0.0	4.	20.	0.0	3.0
16	3.0	0.0	25.0	70.0	38.0	0.0	4.	3.	0.0	3.0
17	3.2	0.0	18.0	0.0	0.0	45.0	4.	4.	0.0	2.0
18	3.2	0.0	45.0	160.0	100.0	0.0	4.	5.	0.0	3.0
19	3.2	0.0	21.0	60.0	30.0	0.0	4.	30.	0.0	1.5
20	3.2	0.0	40.0	52.0	32.0	0.0	4.	10.	0.0	1.0
MEAN	3.2	0.0	30.9	70.3	45.1	52.6	4.	14.	0.0	2.4
STD DEV	.1	0.0	11.7	45.3	33.6	29.5	0.	22.	0.0	1.4

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMESIA TREDENTATA STUDY AREA RED WASH DATE 04 JUNE 1981

PLANT NO..	PHENLLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.3	9.1	42.5	86.0	58.0	0.0	4.	0.	0.0	5.1
2	3.4	0.0	27.0	16.0	10.0	0.0	5.	90.	0.0	0.0
3	3.3	9.0	35.0	140.0	118.0	0.0	4.	0.	0.0	2.0
4	3.4	0.0	32.0	30.0	17.0	0.0	3.	0.	0.0	0.0
5	3.3	9.0	29.0	36.0	31.0	0.0	3.	0.	0.0	2.5
6	3.4	9.0	25.0	49.0	27.0	0.0	3.	0.	0.0	3.0
7	3.4	9.0	38.0	97.0	70.0	0.0	4.	0.	0.0	2.5
8	3.4	0.0	29.0	33.0	17.0	0.0	3.	0.	0.0	0.0
9	3.4	9.0	31.0	156.0	129.0	0.0	4.	0.	0.0	2.5
10	3.3	0.0	34.0	75.0	73.0	0.0	4.	0.	0.0	0.0
11	3.4	0.0	14.0	23.0	12.0	0.0	4.	20.	0.0	0.0
12	3.4	9.0	30.0	102.0	120.0	0.0	4.	0.	0.0	3.0
13	3.4	9.0	12.0	23.0	14.0	0.0	2.	0.	0.0	1.5
14	3.3	9.0	30.0	76.0	74.0	0.0	4.	0.	0.0	2.0
15	3.3	0.0	16.0	21.0	17.0	0.0	4.	5.	0.0	0.0
16	3.4	9.1	30.0	60.0	36.0	0.0	4.	0.	0.0	3.0
17	3.4	9.1	20.0	54.0	42.0	0.0	3.	0.	0.0	3.0
18	3.3	9.0	43.0	160.0	125.0	0.0	4.	0.	0.0	2.5
19	3.4	0.0	26.0	40.0	24.0	0.0	5.	50.	0.0	0.0
20	3.4	0.0	42.0	54.0	40.0	0.0	4.	10.	0.0	0.0
MEAN	3.4	9.0	29.3	66.6	52.7	0.0	4.	35.	0.0	2.7
STD DEV	.0	.0	8.9	44.7	41.3	0.0	1.	35.	0.0	.9

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMESIA TREDENTATA STUDY AREA RED WASH DATE 15 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	PHENOLOGICAL SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH	
1	3.4	9.4	47.0	0.0	0.0	0.0	0.	0.	0.0	3.5	
2	3.4	0.0	34.0	0.0	0.0	0.0	0.	0.	0.0	0.0	DECADENT
3	3.4	9.2	45.0	0.0	0.0	0.0	0.	0.	0.0	4.5	
4	3.5	9.1	33.5	0.0	0.0	0.0	0.	0.	0.0	1.0	
5	3.4	9.2	31.0	0.0	0.0	0.0	0.	0.	0.0	3.5	
6	3.5	9.3	31.5	0.0	0.0	0.0	0.	0.	0.0	5.0	
7	3.4	9.4	38.5	0.0	0.0	0.0	0.	0.	0.0	6.0	
8	3.5	9.5	34.0	0.0	0.0	0.0	0.	0.	0.0	8.0	
9	3.5	9.3	32.5	0.0	0.0	0.0	0.	0.	0.0	5.0	
10	3.5	9.1	31.0	0.0	0.0	0.0	0.	0.	0.0	2.0	
11	3.5	9.0	18.0	0.0	0.0	0.0	0.	0.	0.0	0.0	
12	3.5	9.2	36.0	0.0	0.0	0.0	0.	0.	0.0	4.0	
13	3.5	9.1	11.5	0.0	0.0	0.0	0.	0.	0.0	2.0	
14	3.4	9.1	33.5	0.0	0.0	0.0	0.	0.	0.0	2.0	
15	3.4	9.1	13.0	0.0	0.0	0.0	0.	0.	0.0	1.5	
16	3.5	9.4	33.5	0.0	0.0	0.0	0.	0.	0.0	4.5	
17	3.5	9.1	22.0	0.0	0.0	0.0	0.	0.	0.0	3.0	
18	3.4	9.2	36.0	0.0	0.0	0.0	0.	0.	0.0	3.0	
19	3.4	9.1	20.5	0.0	0.0	0.0	0.	0.	0.0	2.0	
20	3.5	9.2	54.0	0.0	0.0	0.0	0.	0.	0.0	3.5	
MEAN	3.5	9.2	31.8	0.0	0.0	0.0	0.	0.	0.0	3.6	
STD DEV	.1	.1	10.7	0.0	0.0	0.0	0.	0.	0.0	1.8	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMESIA TREDENTATA    STUDY AREA RED WASH            DATE 29  JUNE      1981
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PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD     NEW    NEW
NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH   VEG.   SEED
       VEG.  REPR.                              CLASS   PERCENT  TWIG   STALK
                                                                 LNGTH  LNGTH
*********************************************************************************
  1     3.6   9.5   32.0    0.0    0.0    0.0    0.       0.      0.0    8.5
  2     3.5   9.0   28.0    0.0    0.0    0.0    0.       0.      0.0    0.0
  3     3.6   9.5   31.0    0.0    0.0    0.0    0.       0.      0.0    6.0
  4     3.5   9.1   30.5    0.0    0.0    0.0    0.       0.      0.0    1.0
  5     3.5   9.5   31.0    0.0    0.0    0.0    0.       0.      0.0    6.5
  6     3.5   9.5   31.0    0.0    0.0    0.0    0.       0.      0.0    7.0
  7     3.6   9.5   36.0    0.0    0.0    0.0    0.       0.      0.0    8.5
  8     3.5   9.2   31.0    0.0    0.0    0.0    0.       0.      0.0    2.0
  9     3.6   9.5   28.0    0.0    0.0    0.0    0.       0.      0.0    8.0
 10     3.5   9.4   34.5    0.0    0.0    0.0    0.       0.      0.0    6.0
 11     3.6   9.1   17.0    0.0    0.0    0.0    0.       0.      0.0    1.0
 12     3.6   9.4   33.0    0.0    0.0    0.0    0.       0.      0.0    6.0
 13     3.5   9.1   11.0    0.0    0.0    0.0    0.       0.      0.0    1.0
 14     3.6   9.5   29.0    0.0    0.0    0.0    0.       0.      0.0    6.5
 15     3.5   9.2   13.0    0.0    0.0    0.0    0.       0.      0.0    1.0
 16     3.6   9.6   30.0    0.0    0.0    0.0    0.       0.      0.0   11.0
 17     3.6   9.2   23.0    0.0    0.0    0.0    0.       0.      0.0    1.5
 18     3.6   9.5   44.0    0.0    0.0    0.0    0.       0.      0.0    7.0
 19     3.5   9.5   21.0    0.0    0.0    0.0    0.       0.      0.0    4.0
 20     3.6   9.2   43.0    0.0    0.0    0.0    0.       0.      0.0    1.0


  MEAN  3.6   9.3   28.9    0.0    0.0    0.0    0.       0.      0.0    4.9

STD DEV  .1    .2    8.5    0.0    0.0    0.0    0.       0.      0.0    3.2

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TREDENTATA   STUDY AREA RED WASH              DATE 13  JULY     1981
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PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT  DEAD     NEW   NEW
NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
      VEG.  REPR.                                CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
*******************************************************************************
  1    4.6   9.5     46.0   0.0    0.0    0.0    0.      0.      0.0  10.0
  2    3.8   0.0     32.0   0.0    0.0    0.0    0.      0.      0.0   0.0 DECADENT
  3    4.1   9.6     49.0   0.0    0.0    0.0    0.      0.      0.0   7.5
  4    4.1   0.0     32.0   0.0    0.0    0.0    0.      0.      0.0   0.0
  5    4.0   9.6     32.0   0.0    0.0    0.0    0.      0.      0.0   6.5
  6    4.6   9.6     34.0   0.0    0.0    0.0    0.      0.      0.0   8.5
  7    4.6   9.6     36.0   0.0    0.0    0.0    0.      0.      0.0  10.0
  8    4.6   0.0     25.0   0.0    0.0    0.0    0.      0.      0.0   0.0
  9    4.6   9.7     36.0   0.0    0.0    0.0    0.      0.      0.0   8.0
 10    4.3   9.5     30.0   0.0    0.0    0.0    0.      0.      0.0   5.5
 11    4.1   0.0     17.0   0.0    0.0    0.0    0.      0.      0.0   0.0
 12    4.3   9.5     37.0   0.0    0.0    0.0    0.      0.      0.0   9.0
 13    4.0   0.0     11.0   0.0    0.0    0.0    0.      0.      0.0   0.0
 14    4.0   9.6     30.0   0.0    0.0    0.0    0.      0.      0.0   4.5
 15    4.1   0.0     13.0   0.0    0.0    0.0    0.      0.      0.0   0.0
 16    4.6   9.6     29.0   0.0    0.0    0.0    0.      0.      0.0   8.0
 17    4.2   9.5     20.0   0.0    0.0    0.0    0.      0.      0.0   4.9
 18    4.6   9.6     47.0   0.0    0.0    0.0    0.      0.      0.0   7.0
 19    4.6   9.6     26.0   0.0    0.0    0.0    0.      0.      0.0   6.0
 20    4.1   0.0     39.0   0.0    0.0    0.0    0.      0.      0.0   0.0

  MEAN 4.3   9.6     31.1   0.0    0.0    0.0    0.      0.      0.0   7.3

STD DEV .3    .1     10.5   0.0    0.0    0.0    0.      0.      0.0   1.8

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TREDENTATA STUDY AREA RED WASH DATE 27 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH	
1	4.0	9.8	24.7	0.0	0.0	0.0	3.	15.	.4	0.0	
2	4.0	9.0	12.8	0.0	0.0	0.0	4.	85.	.2	0.0	DECADENT
3	4.1	9.8	7.8	0.0	0.0	0.0	4.	70.	.7	0.0	
4	4.2	9.6	17.6	0.0	0.0	0.0	4.	12.	.9	0.0	
5	4.2	9.7	11.9	0.0	0.0	0.0	3.	10.	.8	0.0	
6	4.6	9.7	38.8	0.0	0.0	0.0	3.	7.	1.0	0.0	
7	4.4	9.8	13.6	0.0	0.0	0.0	5.	15.	1.2	0.0	DECADENT
8	4.6	9.6	25.7	0.0	0.0	0.0	4.	3.	1.0	0.0	
9	4.4	9.8	16.6	0.0	0.0	0.0	4.	13.	.8	0.0	
10	4.1	9.5	16.2	0.0	0.0	0.0	3.	60.	.2	0.0	
11	4.3	9.5	20.0	0.0	0.0	0.0	4.	15.	.6	0.0	
12	4.2	9.5	12.8	0.0	0.0	0.0	4.	10.	.8	0.0	
13	4.4	9.6	23.7	0.0	0.0	0.0	4.	13.	1.0	0.0	
14	4.3	9.6	25.2	0.0	0.0	0.0	3.	8.	.9	0.0	
15	4.0	9.6	18.6	0.0	0.0	0.0	5.	55.	.7	0.0	DECADENT
16	4.3	9.8	20.0	0.0	0.0	0.0	4.	20.	1.2	0.0	
17	4.2	9.5	16.3	0.0	0.0	0.0	4.	7.	1.1	0.0	
18	4.5	9.7	34.4	0.0	0.0	0.0	4.	4.	1.2	0.0	
19	4.5	9.7	28.8	0.0	0.0	0.0	4.	15.	.8	0.0	
20	4.1	9.5	13.0	0.0	0.0	0.0	4.	30.	.4	0.0	DECADENT
MEAN	4.3	9.6	19.9	0.0	0.0	0.0	4.	23.	.8	0.0	
STD DEV	.2	.2	7.9	0.0	0.0	0.0	1.	24.	.3	0.0	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMESIA TREDENTATA   STUDY AREA RED WASH            DATE 10  AUGUST   1981
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  PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW    NEW
  NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.   SEED
        VEG.  REPR.                               CLASS  PERCENT  TWIG   STALK
                                                                  LNGTH  LNGTH
******************************************************************************
     1    4.6   9.8   49.5    0.0    0.0    0.0    4.      5.      .5   0.0
     2    4.0   9.3   49.0    0.0    0.0    0.0    5.     90.      .3   0.0 DECADENT
     3    4.6   9.8   59.3    0.0    0.0    0.0    4.      2.      .6   0.0
     4    4.5   9.5   34.0    0.0    0.0    0.0    4.     10.      .6   0.0
     5    4.6   9.7   39.3    0.0    0.0    0.0    4.      3.      .6   0.0
     6    4.6   9.7   33.7    0.0    0.0    0.0    3.      7.      .5   0.0
     7    4.6   9.8   42.8    0.0    0.0    0.0    4.      2.      .5   0.0
     8    4.4   9.6   34.0    0.0    0.0    0.0    3.      5.      .3   0.0
     9    4.6   9.8   37.0    0.0    0.0    0.0    4.      6.      .6   0.0
    10    4.4   9.5   38.1    0.0    0.0    0.0    4.      1.      .4   0.0
    11    4.2   9.4   21.6    0.0    0.0    0.0    5.     30.      .3   0.0 DECADENT
    12    4.5   9.5   43.5    0.0    0.0    0.0    4.      1.      .6   0.0
    13    4.2   9.4   13.9    0.0    0.0    0.0    2.     25.      .3   0.0
    14    4.5   9.6   39.2    0.0    0.0    0.0    4.      2.      .4   0.0
    15    4.4   9.5   17.5    0.0    0.0    0.0    5.     50.      .3   0.0 DECADENT
    16    4.6   9.8   43.2    0.0    0.0    0.0    4.      6.      .6   0.0
    17    4.6   9.5   25.0    0.0    0.0    0.0    4.     12.      .5   0.0
    18    4.6   9.7   47.7    0.0    0.0    0.0    4.      3.      .6   0.0
    19    4.4   9.7   29.0    0.0    0.0    0.0    5.     60.      .3   0.0
    20    4.4   9.5   46.0    0.0    0.0    0.0    4.     10.      .4   0.0

   MEAN   4.5   9.6   37.2    0.0    0.0    0.0    4.     17.      .5   0.0

STD DEV    .2    .2   11.5    0.0    0.0    0.0    1.     24.      .1   0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TREDENTATA STUDY AREA RED WASH DATE 25 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.9	9.9	41.0	0.0	0.0	0.0	0.	0.	2.5	10.5
2	4.1	0.0	40.0	0.0	0.0	0.0	0.	0.	.5	0.0
3	4.8	9.9	45.0	0.0	0.0	0.0	0.	0.	1.0	8.0
4	4.7	0.0	30.0	0.0	0.0	0.0	0.	0.	.5	0.0
5	4.8	9.8	48.0	0.0	0.0	0.0	0.	0.	2.5	8.0
6	4.9	9.8	29.8	0.0	0.0	0.0	0.	0.	3.5	8.5
7	5.0	9.9	41.0	0.0	0.0	0.0	0.	0.	4.0	10.5
8	4.6	0.0	27.0	0.0	0.0	0.0	0.	0.	3.0	0.0
9	4.6	0.0	25.0	0.0	0.0	0.0	0.	0.	2.0	0.0
10	4.8	9.9	36.0	0.0	0.0	0.0	0.	0.	1.0	9.0
11	4.3	0.0	18.0	0.0	0.0	0.0	0.	0.	.3	0.0
12	4.8	9.9	38.0	0.0	0.0	0.0	0.	0.	1.0	8.0
13	4.7	0.0	11.0	0.0	0.0	0.0	0.	0.	.5	0.0
14	4.6	9.9	30.0	0.0	0.0	0.0	0.	0.	1.0	7.0
15	4.7	0.0	16.0	0.0	0.0	0.0	0.	0.	.5	0.0
16	4.9	0.0	16.0	0.0	0.0	0.0	0.	0.	7.5	0.0
17	4.9	0.0	19.0	0.0	0.0	0.0	0.	0.	2.5	0.0
18	4.9	9.8	50.0	0.0	0.0	0.0	0.	0.	2.0	6.0
19	4.8	9.9	22.0	0.0	0.0	0.0	0.	0.	2.0	4.0
20	4.8	0.0	44.0	0.0	0.0	0.0	0.	0.	1.0	0.0
MEAN	4.8	9.9	31.3	0.0	0.0	0.0	0.	0.	1.9	8.0
STD DEV	.2	.0	11.8	0.0	0.0	0.0	0.	0.	1.7	2.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMESIA TREDENTATA   STUDY AREA RED WASH               DATE 13  SEPT      1981
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PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
       VEG.  REPR.                               CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
**********************************************************************************
  1      5.0  11.5    55.0   0.0    0.0    0.0    0.       0.    2.5   8.0
  2      5.5   0.0    32.0   0.0    0.0    0.0    0.       0.    0.0   0.0
  3      5.5  11.5    47.0   0.0    0.0    0.0    0.       0.    1.0   6.0
  4      5.5  11.5    20.5   0.0    0.0    0.0    0.       0.    1.0   5.0
  5      5.5  11.0    38.5   0.0    0.0    0.0    0.       0.    1.0   5.0
  6      5.5  11.0    28.4   0.0    0.0    0.0    0.       0.    2.0   8.0
  7      5.5  11.5    40.0   0.0    0.0    0.0    0.       0.    2.0   9.0
  8      5.5   0.0    34.5   0.0    0.0    0.0    0.       0.    2.0   0.0
  9      5.5  11.6    40.5   0.0    0.0    0.0    0.       0.    2.5   7.5
 10      5.5  11.6    32.0   0.0    0.0    0.0    0.       0.    1.0   5.0
 11      5.5   0.0    17.0   0.0    0.0    0.0    0.       0.     .5   0.0
 12      5.5  10.7    29.0   0.0    0.0    0.0    0.       0.    1.0   8.0
 13      5.5   0.0    11.0   0.0    0.0    0.0    0.       0.    1.0   0.0
 14      5.5  10.8    39.5   0.0    0.0    0.0    0.       0.    1.5   8.0
 15      5.5   0.0    17.5   0.0    0.0    0.0    0.       0.    1.0   0.0
 16      5.5  10.9    39.5   0.0    0.0    0.0    0.       0.    1.0   8.0
 17      5.5  11.0    19.0   0.0    0.0    0.0    0.       0.     .5   5.5
 18      5.5  10.8    47.0   0.0    0.0    0.0    0.       0.    1.0   6.5
 19      5.5  11.2    24.0   0.0    0.0    0.0    0.       0.     .5   4.5
 20      5.5   0.0    46.0   0.0    0.0    0.0    0.       0.     .5   0.0


   MEAN  5.5  11.2    32.9   0.0    0.0    0.0    0.       0.    1.2   6.7

STD DEV   .1    .3    12.0   0.0    0.0    0.0    0.       0.     .7   1.5

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA STUDY AREA SHOSHONI 7 DATE 1 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
2	2.8	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	3.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	3.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
5	3.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
6	3.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
7	3.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
8	3.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
9	3.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
10	3.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	3.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	3.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	3.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
14	3.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
15	3.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
16	3.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
17	3.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
18	3.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
19	3.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
20	3.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	3.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
STD DEV	.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA   STUDY AREA SHOSHONI 7   DATE 20 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH	
1	3.2	9.0	19.0	41.0	25.0	0.0	0.	0.	0.0	0.0	
2	3.0	0.0	11.0	11.0	3.0	0.0	0.	99.	0.0	0.0	DECADENT
3	3.1	9.0	7.0	19.0	18.0	0.0	0.	0.	0.0	0.0	DECADENT
4	3.1	9.0	20.0	34.0	31.0	0.0	0.	0.	0.0	0.0	
5	3.1	0.0	9.0	31.0	26.0	0.0	0.	0.	0.0	0.0	
6	3.2	9.1	28.0	53.0	32.0	0.0	0.	0.	0.0	0.0	
7	3.2	9.1	21.0	29.0	13.0	0.0	0.	80.	0.0	0.0	DECADENT
8	3.3	9.1	23.0	53.0	40.0	0.0	0.	0.	0.0	0.0	
9	3.2	9.0	17.0	40.0	24.0	0.0	0.	0.	0.0	0.0	
10	3.2	9.1	10.0	16.0	12.0	0.0	0.	60.	0.0	0.0	DECADENT
11	3.1	9.0	17.0	39.0	19.0	0.0	0.	0.	0.0	0.0	
12	3.1	9.0	11.0	51.0	25.0	0.0	0.	0.	0.0	0.0	
13	3.2	9.1	15.0	59.0	25.0	0.0	0.	0.	0.0	0.0	
14	3.1	9.0	21.0	49.0	29.0	0.0	0.	0.	0.0	0.0	DECADENT
15	3.1	9.1	13.0	10.0	4.0	0.0	0.	0.	0.0	0.0	
16	3.1	9.1	13.0	19.0	9.0	0.0	0.	0.	0.0	0.0	
17	3.2	0.0	16.0	35.0	20.0	0.0	0.	0.	0.0	0.0	DECADENT
18	3.2	9.1	31.0	41.0	40.0	0.0	0.	0.	0.0	0.0	
19	3.2	9.1	21.0	37.0	17.0	0.0	0.	0.	0.0	0.0	
20	3.1	9.0	16.0	42.0	19.0	0.0	0.	0.	0.0	0.0	
MEAN	3.2	9.1	17.0	35.5	21.6	0.0	0.	80.	0.0	0.0	
STD DEV	.1	.1	6.2	14.4	10.3	0.0	0.	20.	0.0	0.0	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA SHOSHONI 7          DATE 03  JUNE      1981
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PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW    NEW
NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.   SEED
       VEG.  REPR.                               CLASS  PERCENT  TWIG   STALK
                                                                 LNGTH  LNGTH
****************************************************************************
  1    3.3   9.0    19.9   0.0    0.0    0.0     0.      0.     0.0    0.0
  2.   3.0   0.0    13.2   0.0    0.0    0.0     0.      0.     0.0    0.0 DECADENT
  3    3.2   9.1     8.5   0.0    0.0    0.0     0.      0.     0.0    0.0 DECADENT
  4    3.2   9.1    21.1   0.0    0.0    0.0     0.      0.     0.0    0.0
  5    3.2   9.0    10.6   0.0    0.0    0.0     0.      0.     0.0    0.0
  6    3.3   9.2    32.0   0.0    0.0    0.0     0.      0.     0.0    0.0
  7    3.3   9.2    22.5   0.0    0.0    0.0     0.      0.     0.0    0.0 DECADENT
  8    3.4   9.2    24.7   0.0    0.0    0.0     0.      0.     0.0    0.0
  9    3.3   9.1    20.0   0.0    0.0    0.0     0.      0.     0.0    0.0
 10    3.2   9.2    13.2   0.0    0.0    0.0     0.      0.     0.0    0.0
 11    3.3   9.2    21.2   0.0    0.0    0.0     0.      0.     0.0    0.0
 12    3.1   9.2    12.4   0.0    0.0    0.0     0.      0.     0.0    0.0
 13    3.3   9.2    21.1   0.0    0.0    0.0     0.      0.     0.0    0.0
 14    3.3   9.2    21.0   0.0    0.0    0.0     0.      0.     0.0    0.0
 15    3.3   9.2    19.2   0.0    0.0    0.0     0.      0.     0.0    0.0 DECADENT
 16    3.2   9.1    19.2   0.0    0.0    0.0     0.      0.     0.0    0.0
 17    3.2   9.0    19.7   0.0    0.0    0.0     0.      0.     0.0    0.0
 18    3.3   9.2    20.6   0.0    0.0    0.0     0.      0.     0.0    0.0
 19    3.3   9.2    24.5   0.0    0.0    0.0     0.      0.     0.0    0.0
 20    3.2   9.1    17.6   0.0    0.0    0.0     0.      0.     0.0    0.0


   MEAN  3.2   9.1    19.1   0.0    0.0    0.0     0.      0.     0.0    0.0

STD DEV   .1    .1     5.4   0.0    0.0    0.0     0.      0.     0.0    0.0


 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA SHOSHONI 7          DATE 18  JUNE     1981
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 PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD     NEW    NEW
 NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH    VEG.   SEED
       VEG.  REPR.                                CLASS  PERCENT   TWIG   STALK
                                                                   LNGTH  LNGTH
*******************************************************************************
   1   3.7   9.4     23.0    0.0    0.0    0.0    0.       0.      0.0    6.0
   2   3.3   0.0     12.5    0.0    0.0    0.0    0.       0.      0.0    0.0
   3   3.4   9.4      8.0    0.0    0.0    0.0    0.       0.      0.0    4.0
   4   3.6   9.4     21.5    0.0    0.0    0.0    0.       0.      0.0    4.0
   5   3.5   0.0     11.0    0.0    0.0    0.0    0.       0.      0.0    0.0
   6   4.0   9.4     35.0    0.0    0.0    0.0    0.       0.      0.0    5.5
   7   3.7   9.4     22.4    0.0    0.0    0.0    0.       0.      0.0    5.0
   8   4.5   9.5     25.5    0.0    0.0    0.0    0.       0.      0.0    6.0
   9   3.5   9.4     18.1    0.0    0.0    0.0    0.       0.      0.0    5.0
  10   4.5   9.4     14.9    0.0    0.0    0.0    0.       0.      0.0    7.0
  11   3.7   9.5     24.5    0.0    0.0    0.0    0.       0.      0.0    5.0
  12   3.6   9.4     13.5    0.0    0.0    0.0    0.       0.      0.0    5.0
  13   4.0   9.5     21.0    0.0    0.0    0.0    0.       0.      0.0    5.5
  14   3.9   9.4     23.0    0.0    0.0    0.0    0.       0.      0.0    6.5
  15   4.1   9.3     21.5    0.0    0.0    0.0    0.       0.      0.0    7.0
  16   4.2   9.5     18.0    0.0    0.0    0.0    0.       0.      0.0    4.5
  17   3.6   9.3     19.5    0.0    0.0    0.0    0.       0.      0.0    8.0
  18   4.0   9.5     33.5    0.0    0.0    0.0    0.       0.      0.0    2.0
  19   4.2   9.5     27.5    0.0    0.0    0.0    0.       0.      0.0    7.0
  20   3.8   9.4     16.5    0.0    0.0    0.0    0.       0.      0.0    9.0
*******************************************************************************

  MEAN 3.8   9.4     20.5    0.0    0.0    0.0    0.       0.      0.0    5.6

STD DEV   .3    .1    6.9    0.0    0.0    0.0    0.       0.      0.0    1.7

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA SHOSHONI 7   DATE 30 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE		PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
	VEG.	REPR.								
1	4.1	9.5	23.0	0.0	0.0	0.0	0.	0.	0.0	6.0
2	3.5	0.0	11.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	4.0	9.5	8.0	0.0	0.0	0.0	0.	0.	0.0	4.0
4	4.1	9.5	19.0	0.0	0.0	0.0	0.	0.	0.0	5.0
5	4.1	0.0	10.0	0.0	0.0	0.0	0.	0.	0.0	0.0
6	4.2	9.5	30.0	0.0	0.0	0.0	0.	0.	0.0	5.0
7	4.2	9.5	19.0	0.0	0.0	0.0	0.	0.	0.0	6.0
8	4.2	9.6	22.0	0.0	0.0	0.0	0.	0.	0.0	6.0
9	4.0	0.0	16.0	0.0	0.0	0.0	0.	0.	0.0	0.0
10	4.1	9.4	14.0	0.0	0.0	0.0	0.	0.	0.0	7.0
11	4.1	9.5	19.0	0.0	0.0	0.0	0.	0.	0.0	5.0
12	4.0	9.5	13.0	0.0	0.0	0.0	0.	0.	0.0	7.0
13	4.1	9.6	24.0	0.0	0.0	0.0	0.	0.	0.0	6.0
14	4.3	9.4	24.0	0.0	0.0	0.0	0.	0.	0.0	7.0
15	4.2	9.6	20.0	0.0	0.0	0.0	0.	0.	0.0	10.0
16	4.1	9.6	18.0	0.0	0.0	0.0	0.	0.	0.0	9.0
17	4.2	0.0	19.0	0.0	0.0	0.0	0.	0.	0.0	0.0
18	4.1	9.6	20.0	0.0	0.0	0.0	0.	0.	0.0	6.0
19	4.4	9.6	30.0	0.0	0.0	0.0	0.	0.	0.0	11.0
20	4.2	9.4	18.0	0.0	0.0	0.0	0.	0.	0.0	3.0
MEAN	4.1	9.5	18.9	0.0	0.0	0.0	0.	0.	0.0	6.4
STD DEV	.2	.1	5.9	0.0	0.0	0.0	0.	0.	0.0	2.1

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA SHOSHONI 7          DATE 13  JULY     1981
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 PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW    NEW
 NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH   VEG.   SEED
        VEG.  REPR.                                   CLASS   PERCENT  TWIG   STALK
                                                                       LNGTH  LNGTH
**********************************************************************************
    1    4.6   9.5    32.2    0.0     0.0     0.0     3.        5.      .6    4.7
    2    4.3   0.0    11.0    0.0     0.0     0.0     5.       90.      .2    0.0
    3    4.0   9.5    11.4    0.0     0.0     0.0     5.       30.     0.0    4.5
    4    4.5   9.5    18.2    0.0     0.0     0.0     3.        5.      .5    6.2
    5    4.1   9.5    10.6    0.0     0.0     0.0     3.        5.      .1    2.0
    6    4.1   9.5    27.5    0.0     0.0     0.0     4.        5.      .4    5.2
    7    4.2   9.5    21.7    0.0     0.0     0.0     5.       60.      .4    4.9
    8    4.4   9.5    28.2    0.0     0.0     0.0     4.        5.      .5    7.1
    9    3.9   9.5    17.5    0.0     0.0     0.0     4.       40.     0.0    4.0
   10    4.3   9.5    17.3    0.0     0.0     0.0     2.       50.      .6    7.2
   11    3.9   9.5    16.0    0.0     0.0     0.0     4.       20.     0.0    7.8
   12    3.9   9.5    13.5    0.0     0.0     0.0     4.       10.     0.0    6.5
   13    4.2   9.5    21.0    0.0     0.0     0.0     4.       10.      .6    5.8
   14    4.6   9.5    23.5    0.0     0.0     0.0     4.       10.      .7    7.5
   15    4.6   9.5    19.0    0.0     0.0     0.0     5.       80.      .8    2.5  VERY DECADENT
   16    4.0   9.5    18.0    0.0     0.0     0.0     2.       20.      .2    8.0
   17    4.2   0.0    19.0    0.0     0.0     0.0     3.       10.      .2    0.0
   18    4.5   9.5    31.5    0.0     0.0     0.0     4.       15.      .7    9.0
   19    4.7   9.5    23.3    0.0     0.0     0.0     4.       10.     1.2    9.2
   20    4.0   9.5    16.0    0.0     0.0     0.0     4.       30.      .1    5.0


   MEAN  4.3   9.5    19.8    0.0     0.0     0.0     4.       26.      .5    6.0

 STD DEV  .3   0.0     6.4    0.0     0.0     0.0     1.       26.      .3    2.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA SHOSHONI 7          DATE 27  JULY     1981
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PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW    NEW
NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH  VEG.   SEED
       VEG.  REPR.                              CLASS   PERCENT TWIG   STALK
                                                                LNGTH  LNGTH
**************************************************************************
  1     4.0   9.6   24.7    0.0    0.0    0.0    3.      15.     .4    0.0
  2     4.0   9.0   12.8    0.0    0.0    0.0    4.      85.     .2    0.0 DECADENT
  3     4.1   9.6    7.8    0.0    0.0    0.0    4.      70.     .7    0.0
  4     4.2   9.6   17.6    0.0    0.0    0.0    4.      12.     .9    0.0
  5     4.2   9.4   11.9    0.0    0.0    0.0    3.      10.     .8    0.0
  6     4.6   9.6   38.8    0.0    0.0    0.0    3.       7.    1.0    0.0
  7     4.4   9.6   13.6    0.0    0.0    0.0    5.      15.    1.2    0.0 DECADENT
  8     4.6   9.6   25.7    0.0    0.0    0.0    4.       3.    1.0    0.0
  9     4.4   9.5   16.6    0.0    0.0    0.0    4.      13.     .8    0.0
 10     4.1   9.6   16.2    0.0    0.0    0.0    3.      60.     .2    0.0
 11     4.3   9.6   20.0    0.0    0.0    0.0    4.      15.     .6    0.0
 12     4.2   9.6   12.8    0.0    0.0    0.0    4.      10.     .8    0.0
 13     4.4   9.6   23.7    0.0    0.0    0.0    4.      13.    1.0    0.0
 14     4.3   9.6   25.2    0.0    0.0    0.0    3.      18.     .9    0.0
 15     4.0   9.6   18.6    0.0    0.0    0.0    5.      55.     .7    0.0 DECADENT
 16     4.3   9.7   20.0    0.0    0.0    0.0    4.      20.    1.2    0.0
 17     4.2   9.4   16.3    0.0    0.0    0.0    4.       7.    1.1    0.0
 18     4.5   9.7   34.4    0.0    0.0    0.0    4.       4.    1.2    0.0
 19     4.5   9.7   28.8    0.0    0.0    0.0    4.      15.     .8    0.0
 20     4.1   9.6   13.0    0.0    0.0    0.0    4.      30.     .4    0.0 DECADENT


   MEAN 4.3   9.6   19.9    0.0    0.0    0.0    4.      24.     .8    0.0

STD DEV  .2    .2    7.9    0.0    0.0    0.0    1.      24.     .3    0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA SHOSHONI 7          DATE 10  AUGUST   1981
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 PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW    NEW
 NO.    STAGE SCORE   HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH   VEG.   SEED
         VEG.  REPR.                                  CLASS   PERCENT  TWIG   STALK
                                                                       LNGTH  LNGTH
*****************************************************************************************
   1     4.6    9.3    23.0    0.0     0.0     0.0     0.      0.       .5    2.5
   2     4.2    0.0    13.0    0.0     0.0     0.0     0.      0.      0.0    0.0
   3     4.2    9.6    12.0    0.0     0.0     0.0     0.      0.      0.0    5.0
   4     4.2    9.7    18.0    0.0     0.0     0.0     0.      0.      0.0    5.0
   5     4.2    9.4    17.0    0.0     0.0     0.0     0.      0.      0.0    2.0
   6     4.3    9.7    33.0    0.0     0.0     0.0     0.      0.       .5    5.0
   7     4.2    9.7    23.0    0.0     0.0     0.0     0.      0.      0.0     .8
   8     4.4    9.7    31.0    0.0     0.0     0.0     0.      0.      1.5    6.5
   9     4.2    9.7    19.0    0.0     0.0     0.0     0.      0.      0.0    4.0
  10     4.3    0.0    10.0    0.0     0.0     0.0     0.      0.      1.0    0.0
  11     4.3    9.6    20.5    0.0     0.0     0.0     0.      0.       .5    7.0
  12     4.3    9.7    15.0    0.0     0.0     0.0     0.      0.       .5    8.0
  13     4.4    9.6    21.0    0.0     0.0     0.0     0.      0.      1.5    9.0
  14     4.3    9.6    24.0    0.0     0.0     0.0     0.      0.      0.0    8.3
  15     4.4    9.6    19.0    0.0     0.0     0.0     0.      0.      2.0   11.0
  16     4.3    9.6    19.5    0.0     0.0     0.0     0.      0.       .5    9.5
  17     4.4    9.6    18.0    0.0     0.0     0.0     0.      0.      1.0    3.0
  18     4.4    9.6    36.0    0.0     0.0     0.0     0.      0.      2.0   14.0
  19     4.4    9.7    28.0    0.0     0.0     0.0     0.      0.      1.0   12.0
  20     4.2    9.6    12.0    0.0     0.0     0.0     0.      0.      0.0    5.0


   MEAN  4.3    9.6    20.6    0.0     0.0     0.0     0.      0.      1.0    6.5

 STD DEV  .1     .1     7.1    0.0     0.0     0.0     0.      0.       .6    3.6


 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA SHOSHONI 7          DATE 24  AUGUST   1981
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PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW    NEW
NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE      BRANCH   VEG.   SEED
       VEG.  REPR.                                   CLASS    PERCENT  TWIG   STALK
                                                                       LNGTH  LNGTH
*********************************************************************************
  1     4.4    9.5   17.0     0.0     0.0     0.0     0.        0.     0.0     7.4
  2     4.0    0.0   11.9     0.0     0.0     0.0     0.        0.     0.0     0.0
  3     4.1    9.7   10.6     0.0     0.0     0.0     0.        0.     0.0     5.6
  4     4.5    9.7   18.7     0.0     0.0     0.0     0.        0.     0.0     5.6
  5     4.5    9.5   12.6     0.0     0.0     0.0     0.        0.     0.0     2.4
  6     4.6    9.6   13.2     0.0     0.0     0.0     0.        0.     0.0     6.3
  7     4.5    9.6   25.6     0.0     0.0     0.0     0.        0.     0.0     7.5
  8     4.6    9.7   27.0     0.0     0.0     0.0     0.        0.     0.0     9.5
  9     4.5    9.6   13.5     0.0     0.0     0.0     0.        0.     0.0     4.8
 10     4.3    9.4   15.9     0.0     0.0     0.0     0.        0.     0.0     4.5
 11     4.5    9.6   27.3     0.0     0.0     0.0     0.        0.     0.0     8.0
 12     4.6    9.8   19.7     0.0     0.0     0.0     0.        0.     0.0     8.6
 13     4.6    9.8   21.2     0.0     0.0     0.0     0.        0.     0.0     9.0
 14     4.6    9.8   24.0     0.0     0.0     0.0     0.        0.     0.0     5.7
 15     4.6    9.7   21.3     0.0     0.0     0.0     0.        0.     0.0    12.3
 16     4.6    9.8   19.0     0.0     0.0     0.0     0.        0.     0.0     8.9
 17     4.6    9.7   22.0     0.0     0.0     0.0     0.        0.     0.0     2.6
 18     4.6    9.8   33.5     0.0     0.0     0.0     0.        0.     0.0    10.0
 19     4.6    9.7   27.8     0.0     0.0     0.0     0.        0.     0.0     8.7
 20     4.5    9.7   16.0     0.0     0.0     0.0     0.        0.     0.0     6.0


   MEAN 4.5    9.7   19.9     0.0     0.0     0.0     0.        0.     0.0     7.0

STD DEV  .2     .1    6.2     0.0     0.0     0.0     0.        0.     0.0     2.5


  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA    STUDY AREA SHOSHONI 7              DATE 11  SEPT      1981
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 PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD      NEW    NEW
 NO.    STAGE SCORE   HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH     VEG.   SEED
        VEG.  REPR.                                   CLASS   PERCENT   TWIG   STALK
                                                                        LNGTH  LNGTH
****************************************************************************************
   1      4.6  11.5    24.0     0.0     0.0     0.0   0.         0.      1.0    6.6
   2      4.9   0.0    10.5     0.0     0.0     0.0   0.         0.       .3    0.0
   3      4.8  10.9    10.0     0.0     0.0     0.0   0.         0.       .6    3.8
   4      4.9  11.6    19.3     0.0     0.0     0.0   0.         0.       .7    6.5
   5      4.9   0.0    10.4     0.0     0.0     0.0   0.         0.       .4    0.0
   6      4.8  11.0    32.6     0.0     0.0     0.0   0.         0.       .6    6.4
   7      4.8  11.5    21.3     0.0     0.0     0.0   0.         0.       .7    7.6
   8      4.9  11.7    27.0     0.0     0.0     0.0   0.         0.      2.5    6.8
   9      4.9  11.5    16.0     0.0     0.0     0.0   0.         0.       .3    4.1
  10      5.0   0.0    12.2     0.0     0.0     0.0   0.         0.      3.5    0.0
  11      4.9  11.4    19.6     0.0     0.0     0.0   0.         0.       .8    7.2
  12      4.9  11.5    14.2     0.0     0.0     0.0   0.         0.       .9    7.0
  13      4.6  11.8    22.1     0.0     0.0     0.0   0.         0.      1.0    6.0
  14      5.0  12.0    23.3     0.0     0.0     0.0   0.         0.      1.2    8.0
  15      4.9  11.8    20.3     0.0     0.0     0.0   0.         0.      1.4    8.3
  16      4.9  12.1    18.2     0.0     0.0     0.0   0.         0.      3.7    9.0
  17      4.8  11.6    18.0     0.0     0.0     0.0   0.         0.       .7    3.2
  18      4.9  11.8    36.6     0.0     0.0     0.0   0.         0.      4.0   11.5
  19      5.0  11.8    25.7     0.0     0.0     0.0   0.         0.      2.8    9.0
  20      4.9  11.3    14.3     0.0     0.0     0.0   0.         0.       .8    5.3
****************************************************************************************

    MEAN  4.9  11.6    19.8     0.0     0.0     0.0   0.         0.      1.4    6.8

 STD DEV   .1    .3     7.2     0.0     0.0     0.0   0.         0.      1.2    2.1

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA STUDY AREA SWEETWATER DATE 25 MAY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH	
1	3.2	9.0	23.0	32.0	29.0	0.0	0.	0.	0.0	0.0	
2	3.3	9.1	29.0	93.0	68.0	0.0	0.	0.	0.0	0.0	NEW PLANT
3	3.3	9.1	25.0	61.0	39.0	0.0	0.	0.	0.0	0.0	
4	3.2	9.1	42.0	76.0	45.0	0.0	0.	0.	0.0	0.0	
5	3.3	9.1	25.0	21.0	11.0	0.0	0.	0.	0.0	0.0	
6	3.2	9.1	19.0	42.0	25.0	0.0	0.	0.	0.0	0.0	
7	3.3	9.1	25.0	35.0	26.0	0.0	0.	0.	0.0	0.0	
8	3.3	9.0	6.0	25.0	20.0	0.0	0.	0.	0.0	0.0	
9	3.1	9.0	25.0	117.0	87.0	0.0	0.	0.	0.0	0.0	
10	3.2	9.1	31.0	72.0	50.0	0.0	0.	0.	0.0	0.0	
11	3.2	9.1	35.0	36.0	36.0	0.0	0.	0.	0.0	0.0	
12	3.3	9.1	20.0	21.0	20.0	0.0	0.	0.	0.0	0.0	
13	3.3	9.1	28.0	25.0	21.0	0.0	0.	0.	0.0	0.0	
14	2.3	9.1	10.0	26.0	10.0	0.0	0.	0.	0.0	0.0	
15	3.2	9.0	47.0	74.0	47.0	0.0	0.	0.	0.0	0.0	
16	3.3	9.3	39.0	46.0	18.0	0.0	0.	5.	0.0	0.0	
17	3.3	9.1	13.0	43.0	40.0	0.0	0.	0.	0.0	0.0	
18	3.1	9.1	33.0	66.0	51.0	0.0	0.	0.	0.0	0.0	
19	3.2	9.1	22.0	61.0	40.0	0.0	0.	0.	0.0	0.0	
20	3.3	9.1	15.0	14.0	8.0	0.0	0.	0.	0.0	0.0	
MEAN	3.2	9.1	25.6	49.2	34.6	0.0	0.	5.	0.0	0.0	
STD DEV	.2	.1	10.5	27.5	20.1	0.0	0.	0.	0.0	0.0	

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA    STUDY AREA SWEETWATER            DATE  9  JUNE       1981
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 PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW    NEW
 NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH    VEG.   SEED
        VEG.  REPR.                                   CLASS   PERCENT   TWIG   STALK
                                                                        LNGTH  LNGTH
*****************************************************************************************
   1      3.3    9.2    19.6     0.0     0.0     0.0    3.        3.      0.0    1.9 AGE CLASS 3.4
   2      3.4    9.2    29.4     0.0     0.0     0.0    3.        2.      0.0    2.1 AGE CLASS 3.6
   3      3.4    9.2    27.8     0.0     0.0     0.0    3.        5.      0.0    2.3 AGE CLASS 3.4
   4      3.4    9.2    44.5     0.0     0.0     0.0    3.        1.      0.0    2.2 AGE CLASS 3.7
   5      3.4    9.2    20.2     0.0     0.0     0.0    3.        7.      0.0    2.2 AGE CLASS 3.5
   6      3.2    9.1    18.9     0.0     0.0     0.0    3.        4.      0.0    2.5 AGE CLASS 3.5
   7      3.3    9.2    18.2     0.0     0.0     0.0    4.       30.      0.0    1.3 AGE CLASS 4.0
   8      3.3    9.1    14.4     0.0     0.0     0.0    3.        2.      0.0    1.1 AGE CLASS 3.3
   9      3.2    9.2    30.0     0.0     0.0     0.0    3.        1.      0.0    1.7 AGE CLASS 3.2
  10      3.2    9.1    27.5     0.0     0.0     0.0    4.       30.      0.0    1.2 AGE CLASS 4.9
  11      3.3    9.2    37.0     0.0     0.0     0.0    4.        5.      0.0    4.0 AGE CLASS 4.3
  12      3.3    9.1    18.8     0.0     0.0     0.0    4.       60.      0.0    1.0 AGE CLASS 4.9
  13      3.4    9.2    22.0     0.0     0.0     0.0    3.       10.      0.0    1.6 AGE CLASS 3.6
  14      3.4    9.2    11.6     0.0     0.0     0.0    4.       50.      0.0    1.5 AGE CLASS 4.7
  15      3.3    9.2    48.9     0.0     0.0     0.0    3.        2.      0.0    1.4 AGE CLASS 3.5
  16      3.4    9.4    40.6     0.0     0.0     0.0    4.       11.      0.0    2.0 AGE CLASS 4.3
  17      3.4    9.2    16.0     0.0     0.0     0.0    3.        6.      0.0    1.8 AGE CLASS 3.6
  18      3.4    9.4    37.5     0.0     0.0     0.0    3.       15.      0.0    2.4 AGE CLASS 3.5
  19      3.3    9.3    25.0     0.0     0.0     0.0    3.        9.      0.0    2.3 AGE CLASS 3.5
  20      3.4    9.2    17.2     0.0     0.0     0.0    4.        3.      0.0    1.8 AGE CLASS 4.2


   MEAN   3.3    9.2    26.3     0.0     0.0     0.0    3.       12.      0.0    1.9

 STD DEV   .1     .1    10.6     0.0     0.0     0.0    0.       17.      0.0     .7

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA SWEETWATER   DATE 17 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.5	9.4	21.4	0.0	0.0	0.0	0.	0.	0.0	7.5
2	3.4	9.4	30.5	0.0	0.0	0.0	0.	0.	0.0	3.5
3	3.4	9.4	29.0	0.0	0.0	0.0	0.	0.	0.0	4.8
4	3.4	9.5	45.5	0.0	0.0	0.0	0.	0.	0.0	5.0
5	3.5	9.3	21.4	0.0	0.0	0.0	0.	0.	0.0	3.3
6	3.4	9.4	21.5	0.0	0.0	0.0	0.	0.	0.0	3.4
7	3.5	9.4	27.2	0.0	0.0	0.0	0.	0.	0.0	5.5
8	3.4	9.3	9.5	0.0	0.0	0.0	0.	0.	0.0	2.5
9	3.4	9.4	25.5	0.0	0.0	0.0	0.	0.	0.0	6.8
10	3.5	9.5	30.0	0.0	0.0	0.0	0.	0.	0.0	4.3
11	3.5	9.5	48.0	0.0	0.0	0.0	0.	0.	0.0	5.0
12	3.4	9.2	18.5	0.0	0.0	0.0	0.	0.	0.0	1.6
13	3.4	9.3	26.5	0.0	0.0	0.0	0.	0.	0.0	3.5
14	3.4	9.3	9.5	0.0	0.0	0.0	0.	0.	0.0	3.6
15	3.5	9.4	42.5	0.0	0.0	0.0	0.	0.	0.0	4.0
16	3.5	9.5	33.5	0.0	0.0	0.0	0.	0.	0.0	3.5
17	3.4	9.3	10.5	0.0	0.0	0.0	0.	0.	0.0	2.8
18	3.5	9.5	34.5	0.0	0.0	0.0	0.	0.	0.0	4.5
19	3.4	9.4	23.5	0.0	0.0	0.0	0.	0.	0.0	4.2
20	3.5	9.4	17.2	0.0	0.0	0.0	0.	0.	0.0	3.5
MEAN	3.4	9.4	26.3	0.0	0.0	0.0	0.	0.	0.0	4.1
STD DEV	.1	.1	11.0	0.0	0.0	0.0	0.	0.	0.0	1.4

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA SWEETWATER          DATE 01  JULY     1981
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PLANT PHENOLOGICAL  PLANT   PLANT   PLANT   PLANT   PLANT   DEAD     NEW    NEW
NO.   STAGE SCORE   HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH   VEG.   SEED
       VEG.  REPR.                                  CLASS   PERCENT  TWIG   STALK
                                                                     LNGTH  LNGTH
*****************************************************************************************
  1    3.5   9.6    21.0    0.0     0.0     0.0     0.      0.       0.0    .6
  2    3.6   9.5    31.0    0.0     0.0     0.0     0.      0.       0.0    .5
  3    3.6   9.5    28.5    0.0     0.0     0.0     0.      0.       0.0    .5
  4    3.5   9.6    50.5    0.0     0.0     0.0     0.      0.       0.0    .4
  5    3.6   9.5    23.0    0.0     0.0     0.0     0.      0.       0.0    .6
  6    3.5   9.5    17.0    0.0     0.0     0.0     0.      0.       0.0    .4
  7    3.6   9.5    23.5    0.0     0.0     0.0     0.      0.       0.0    .4
  8    3.6   0.0     7.0    0.0     0.0     0.0     0.      0.       0.0   0.0
  9    3.7   9.5    29.5    0.0     0.0     0.0     0.      0.       0.0    .4
 10    3.6   9.5    30.0    0.0     0.0     0.0     0.      0.       0.0    .5
 11    3.6   9.6    50.5    0.0     0.0     0.0     0.      0.       0.0    .5
 12    3.5   9.4    16.5    0.0     0.0     0.0     0.      0.       0.0    .3
 13    3.6   9.5    24.0    0.0     0.0     0.0     0.      0.       0.0    .6
 14    3.4   0.0    10.0    0.0     0.0     0.0     0.      0.       0.0   0.0
 15    3.6   0.0    38.0    0.0     0.0     0.0     0.      0.       0.0   0.0
 16    3.5   9.6    35.0    0.0     0.0     0.0     0.      0.       0.0    .4
 17    3.6   9.4    12.0    0.0     0.0     0.0     0.      0.       0.0    .3
 18    3.5   9.6    41.0    0.0     0.0     0.0     0.      0.       0.0    .6
 19    3.5   9.5    21.0    0.0     0.0     0.0     0.      0.       0.0    .4
 20    3.7   0.0    19.0    0.0     0.0     0.0     0.      0.       0.0   0.0
*****************************************************************************************

 MEAN  3.6   9.5    26.4    0.0     0.0     0.0     0.      0.       0.0    .5

STD DEV .1    .1    12.2    0.0     0.0     0.0     0.      0.       0.0    .1

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA SWEETWATER          DATE 15  JULY     1981
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                                                                    NEW    NEW
PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD       VEG.   SEED
NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH     TWIG   STALK
       VEG.  REPR.                              CLASS   PERCENT    LNGTH  LNGTH

*****************************************************************************
  1    4.3   9.5    20.0   0.0    0.0    0.0    0.       0.        0.0    7.5
  2    4.1   9.5    39.0   0.0    0.0    0.0    0.       0.        0.0    3.0
  3    4.3   9.5    17.0   0.0    0.0    0.0    0.       0.        0.0    6.5
  4    4.4   9.5    42.0   0.0    0.0    0.0    0.       0.        0.0    5.0
  5    4.2   9.5    22.0   0.0    0.0    0.0    0.       0.        0.0    5.5
  6    4.4   9.5    16.0   0.0    0.0    0.0    0.       0.        0.0    5.5
  7    4.3   9.6    21.0   0.0    0.0    0.0    0.       0.        0.0    5.0
  8    4.3   0.0     9.0   0.0    0.0    0.0    0.       0.        0.0    0.0
  9    4.4   9.6    21.0   0.0    0.0    0.0    0.       0.        0.0    6.0
 10    4.3   9.5    30.0   0.0    0.0    0.0    0.       0.        0.0    6.0
 11    4.2   9.5    38.0   0.0    0.0    0.0    0.       0.        0.0    6.0
 12    4.3   0.0    10.0   0.0    0.0    0.0    0.       0.        0.0    0.0
 13    4.3   9.6    14.0   0.0    0.0    0.0    0.       0.        0.0    5.5
 14    4.3   0.0     9.0   0.0    0.0    0.0    0.       0.        0.0    0.0
 15    4.5   9.5    37.0   0.0    0.0    0.0    0.       0.        0.0    5.5
 16    4.3   9.6    30.0   0.0    0.0    0.0    0.       0.        0.0    3.5
 17    4.3   0.0    11.0   0.0    0.0    0.0    0.       0.        0.0    0.0
 18    4.3   0.0    18.0   0.0    0.0    0.0    0.       0.        0.0    0.0
 19    4.3   9.6    23.0   0.0    0.0    0.0    0.       0.        0.0    6.0
 20    4.4   0.0    15.0   0.0    0.0    0.0    0.       0.        0.0    0.0


   MEAN  4.3   9.5    22.1   0.0    0.0    0.0    0.       0.        0.0    5.5

STD DEV   .1    .0    10.5   0.0    0.0    0.0    0.       0.        0.0    1.1


0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA SWEETWATER   DATE 29 JULY 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.2	9.7	21.5	0.0	0.0	0.0	0.	0.	1.0	6.8
2	4.2	9.5	36.5	0.0	0.0	0.0	0.	0.	0.0	3.0
3	4.5	9.5	26.0	0.0	0.0	0.0	0.	0.	2.0	6.0
4	4.4	9.6	53.0	0.0	0.0	0.0	0.	0.	1.8	5.8
5	4.3	9.5	19.5	0.0	0.0	0.0	0.	0.	1.5	5.5
6	4.3	9.5	16.5	0.0	0.0	0.0	0.	0.	1.3	5.0
7	4.4	9.5	22.0	0.0	0.0	0.0	0.	0.	2.5	4.7
8	4.4	0.0	8.0	0.0	0.0	0.0	0.	0.	1.5	0.0
9	4.5	9.5	22.0	0.0	0.0	0.0	0.	0.	1.8	5.3
10	4.4	9.5	35.0	0.0	0.0	0.0	0.	0.	2.1	6.5
11	4.3	9.6	45.5	0.0	0.0	0.0	0.	0.	1.5	6.5
12	4.2	9.5	12.0	0.0	0.0	0.0	0.	0.	0.0	5.9
13	4.3	9.5	14.0	0.0	0.0	0.0	0.	0.	2.0	5.0
14	4.3	0.0	13.0	0.0	0.0	0.0	0.	0.	2.0	0.0
15	4.5	9.5	42.5	0.0	0.0	0.0	0.	0.	2.8	5.5
16	4.3	9.5	32.5	0.0	0.0	0.0	0.	0.	1.3	4.0
17	4.3	9.4	10.5	0.0	0.0	0.0	0.	0.	1.0	1.8
18	4.5	9.6	34.5	0.0	0.0	0.0	0.	0.	3.0	6.2
19	4.3	9.5	21.5	0.0	0.0	0.0	0.	0.	.5	5.3
20	4.3	0.0	16.0	0.0	0.0	0.0	0.	0.	1.8	0.0
MEAN	4.3	9.5	25.1	0.0	0.0	0.0	0.	0.	1.7	5.2
STD DEV	.1	.1	12.7	0.0	0.0	0.0	0.	0.	.6	1.3

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA SWEETWATER          DATE 12   AUGUST   1981
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 PLANT PHENOLOGICAL  PLANT   PLANT   PLANT   PLANT   PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT    LNGTH   WIDTH   DIAM    AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                                  CLASS  PERCENT  TWIG  STALK
                                                                     LNGTH LNGTH
*****************************************************************************
   1     4.6   9.8   20.3    0.0     0.0     0.0     4.       7.     1.5   0.0
   2     4.5   9.7   35.7    0.0     0.0     0.0     4.       3.     1.5   0.0
   3     4.5   9.5   27.8    0.0     0.0     0.0     4.      10.     1.4   0.0
   4     4.6   9.7   50.4    0.0     0.0     0.0     4.      10.     1.6   0.0
   5     4.6   9.8   33.9    0.0     0.0     0.0     4.      15.     1.6   0.0
   6     4.4   9.6   22.0    0.0     0.0     0.0     4.      20.     1.5   0.0
   7     4.3   9.6   21.8    0.0     0.0     0.0     4.      50.     1.4   0.0 DECADENT
   8     4.1   9.4   10.6    0.0     0.0     0.0     3.       6.     1.3   0.0
   9     4.4   9.5   26.5    0.0     0.0     0.0     4.      12.     1.4   0.0
  10     4.5   9.6   36.0    0.0     0.0     0.0     4.      30.     1.6   0.0 DECADENT
  11     4.6   9.7   42.9    0.0     0.0     0.0     4.       2.     1.6   0.0
  12     4.3   9.5   18.1    0.0     0.0     0.0     4.      60.     1.4   0.0 DECADENT
  13     4.4   9.5   22.8    0.0     0.0     0.0     3.       5.     1.4   0.0
  14     4.3   9.5   12.6    0.0     0.0     0.0     4.      75.     1.3   0.0 DECADENT
  15     4.5   9.6   36.5    0.0     0.0     0.0     4.       4.     1.5   0.0
  16     4.6   9.5   33.7    0.0     0.0     0.0     4.      30.     1.5   0.0 DECADENT
  17     4.3   9.4   12.1    0.0     0.0     0.0     3.       3.     1.3   0.0
  18     4.6   9.6   39.5    0.0     0.0     0.0     4.       7.     1.6   0.0
  19     4.6   9.5   24.4    0.0     0.0     0.0     4.       6.     1.5   0.0
  20     4.3   9.4   17.7    0.0     0.0     0.0     4.      70.     1.4   0.0 DECADENT

   MEAN  4.5   9.6   27.3    0.0     0.0     0.0     4.      21.     1.5   0.0

 STD DEV  .1    .1   11.0    0.0     0.0     0.0     0.      24.      .1   0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA STUDY AREA SWEETWATER DATE 24 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.9	9.8	21.0	0.0	0.0	0.0	0.	0.	2.0	8.0
2	4.3	9.7	37.0	0.0	0.0	0.0	0.	0.	.3	3.0
3	4.6	9.7	29.0	0.0	0.0	0.0	0.	0.	2.0	7.0
4	4.7	9.7	50.5	0.0	0.0	0.0	0.	0.	1.5	7.8
5	4.3	9.7	21.0	0.0	0.0	0.0	0.	0.	.5	6.4
6	4.6	9.6	17.5	0.0	0.0	0.0	0.	0.	1.0	5.2
7	4.3	9.7	21.0	0.0	0.0	0.0	0.	0.	.3	4.6
8	4.3	0.0	9.9	0.0	0.0	0.0	0.	0.	.5	0.0
9	4.6	9.7	20.0	0.0	0.0	0.0	0.	0.	2.8	5.3
10	4.5	9.7	30.0	0.0	0.0	0.0	0.	0.	.5	5.6
11	4.6	9.8	43.2	0.0	0.0	0.0	0.	0.	1.5	6.1
12	4.1	9.8	16.5	0.0	0.0	0.0	0.	0.	0.0	3.0
13	4.6	9.6	19.0	0.0	0.0	0.0	0.	0.	.7	5.6
14	4.3	9.6	7.0	0.0	0.0	0.0	0.	0.	.3	5.6
15	4.6	9.7	48.5	0.0	0.0	0.0	0.	0.	2.5	3.5
16	4.6	9.6	33.0	0.0	0.0	0.0	0.	0.	1.5	3.4
17	4.5	0.0	12.0	0.0	0.0	0.0	0.	0.	1.0	0.0
18	4.8	9.8	39.5	0.0	0.0	0.0	0.	0.	2.5	5.6
19	5.0	9.7	22.5	0.0	0.0	0.0	0.	0.	.3	5.8
20	4.8	0.0	16.5	0.0	0.0	0.0	0.	0.	3.0	0.0
MEAN	4.6	9.7	25.7	0.0	0.0	0.0	0.	0.	1.3	5.4
STD DEV	.2	.1	12.6	0.0	0.0	0.0	0.	0.	.9	1.5

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA    STUDY AREA SWEETWATER          DATE 12  SEPT      1981
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PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW    NEW
NO.    STAGE SCORE   HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH    VEG.   SEED
       VEG.  REPR.                                   CLASS   PERCENT   TWIG   STALK
                                                                       LNGTH  LNGTH
*******************************************************************************
  1      4.8  11.4    21.0    0.0     0.0     0.0    0.        0.      2.5    7.0
  2      4.8  11.4    33.5    0.0     0.0     0.0    0.        0.      2.0    4.0
  3      4.8  11.4    25.0    0.0     0.0     0.0    0.        0.      2.0    7.5
  4      4.8  11.0    47.5    0.0     0.0     0.0    0.        0.      2.0    4.5
  5      4.8  11.4    21.0    0.0     0.0     0.0    0.        0.      1.0    7.5
  6      4.8  11.4    19.5    0.0     0.0     0.0    0.        0.      1.0    5.0
  7      4.9  11.3    21.0    0.0     0.0     0.0    0.        0.      3.0    5.0
  8      4.9   0.0     7.0    0.0     0.0     0.0    0.        0.      1.0    0.0
  9      4.9  11.5    28.0    0.0     0.0     0.0    0.        0.      3.0    9.0
 10      4.8  11.1    34.5    0.0     0.0     0.0    0.        0.      2.0    5.5
 11      4.8  11.5    48.0    0.0     0.0     0.0    0.        0.      2.5    4.0
 12      5.0  11.4    13.0    0.0     0.0     0.0    0.        0.       .5    3.0
 13      4.9  11.1    18.0    0.0     0.0     0.0    0.        0.      1.0    6.0
 14      5.0   0.0    14.0    0.0     0.0     0.0    0.        0.      1.5    0.0
 15      4.8  11.4    40.0    0.0     0.0     0.0    0.        0.      3.0    4.5
 16      4.8  10.9    29.5    0.0     0.0     0.0    0.        0.      1.0    3.5
 17      5.0   0.0     8.0    0.0     0.0     0.0    0.        0.      2.0    0.0
 18      4.9  11.1    39.5    0.0     0.0     0.0    0.        0.      2.0    5.0
 19      4.8  11.4    19.0    0.0     0.0     0.0    0.        0.       .5    7.0
 20      5.0  11.4    29.0    0.0     0.0     0.0    0.        0.       .5    5.0


   MEAN  4.9  11.3    25.8    0.0     0.0     0.0    0.        0.      1.7    5.5

STD DEV   .1    .2    11.9    0.0     0.0     0.0    0.        0.       .8    1.6


 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA UPPER GOVT          DATE  1  MAY      1981
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 PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT   DEAD     NEW    NEW
 NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH   VEG.   SEED
        VEG.  REPR.                                   CLASS   PERCENT  TWIG   STALK
                                                                       LNGTH  LNGTH
*****************************************************************************************
   1    2.9   0.0     0.0     0.0     0.0     0.0     0.        0.     0.0    0.0
   2    2.9   0.0     0.0     0.0     0.0     0.0     0.        0.     0.0    0.0
   3    2.8   0.0     0.0     0.0     0.0     0.0     0.        0.     0.0    0.0
   4    3.1   0.0     0.0     0.0     0.0     0.0     0.        0.     0.0    0.0
   5    2.9   0.0     0.0     0.0     0.0     0.0     0.        0.     0.0    0.0
   6    3.0   0.0     0.0     0.0     0.0     0.0     0.        0.     0.0    0.0
   7    2.7   0.0     0.0     0.0     0.0     0.0     0.        0.     0.0    0.0
   8    2.8   0.0     0.0     0.0     0.0     0.0     0.        0.     0.0    0.0
   9    3.2   0.0     0.0     0.0     0.0     0.0     0.        0.     0.0    0.0
  10    2.9   0.0     0.0     0.0     0.0     0.0     0.        0.     0.0    0.0
  11    3.1   0.0     0.0     0.0     0.0     0.0     0.        0.     0.0    0.0
  12    3.2   0.0     0.0     0.0     0.0     0.0     0.        0.     0.0    0.0
  13    3.1   0.0     0.0     0.0     0.0     0.0     0.        0.     0.0    0.0
  14    3.1   0.0     0.0     0.0     0.0     0.0     0.        0.     0.0    0.0
  15    3.0   0.0     0.0     0.0     0.0     0.0     0.        0.     0.0    0.0
  16    3.3   0.0     0.0     0.0     0.0     0.0     0.        0.     0.0    0.0
  17    3.2   0.0     0.0     0.0     0.0     0.0     0.        0.     0.0    0.0
  18    2.9   0.0     0.0     0.0     0.0     0.0     0.        0.     0.0    0.0
  19    2.7   0.0     0.0     0.0     0.0     0.0     0.        0.     0.0    0.0
  20    2.9   0.0     0.0     0.0     0.0     0.0     0.        0.     0.0    0.0


   MEAN 3.0   0.0     0.0     0.0     0.0     0.0     0.        0.     0.0    0.0

STD DEV  .2   0.0     0.0     0.0     0.0     0.0     0.        0.     0.0    0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA UPPER GOVT          DATE 25  MAY      1981
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
*****************************************************************
    1 .   3.3   9.0    26.0   26.0   26.0    0.0    0.       0.     0.0   0.0 DECADENT
    2     3.2   9.0    25.0   61.0   20.0    0.0    0.       0.     0.0   0.0
    3     3.2   9.0    28.0   51.0   30.0    0.0    0.       0.     0.0   0.0
    4     3.2   9.0    28.0   20.0   20.0    0.0    5.      75.     0.0   0.0 DECADENT
    5     3.2   9.0    28.0   61.0   29.0    0.0    0.       0.     0.0   0.0
    6     3.3   9.0    41.0   52.0   47.0    0.0    0.       0.     0.0   0.0
    7     3.3   9.0    22.0   36.0   31.0    0.0    0.       0.     0.0   0.0
    8     3.2   0.0    20.0   26.0   16.0    0.0    5.      60.     0.0   0.0 DECADENT
    9     3.3   9.0    37.0   50.0   46.0    0.0    3.      15.     0.0   0.0
   10     3.2   9.0    35.0   45.0   44.0    0.0    3.       0.     0.0   0.0
   11     3.3   9.0    39.0   46.0   40.0    0.0    5.       0.     0.0   0.0
   12     3.3   9.0    17.0   21.0   13.0    0.0    5.       0.     0.0   0.0
   13     3.2   0.0    34.0  101.0   63.0    0.0    3.       0.     0.0   0.0
   14     3.2   9.0    38.0   49.0   40.0    0.0    3.       0.     0.0   0.0
   15     3.2   0.0    21.0   36.0   33.0    0.0    3.       0.     0.0   0.0
   16     3.3   9.0    34.0   52.0   46.0    0.0    3.       0.     0.0   0.0
   17     3.2   9.0    29.0   53.0   38.0    0.0    4.       0.     0.0   0.0
   18     3.2   9.0    41.0  107.0   56.0    0.0    4.       0.     0.0   0.0
   19     3.2   9.1    23.0   17.0   13.0    0.0    5.       0.     0.0   0.0 DECADENT
   20     3.2   9.1    39.0   70.0   63.0    0.0    4.       0.     0.0   0.0


   MEAN   3.2   9.0    30.3   49.1   35.7    0.0    4.      50.     0.0   0.0

 STD DEV   .0    .0     7.6   23.9   15.3    0.0    1.      31.     0.0   0.0


  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA UPPER GOVT        DATE 09  JUNE     1981
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
*****************************************************************************
   1    3.4   9.1    23.0   0.0    0.0    0.0    4.       10.    0.0   1.5
   2    3.4   9.4    28.0   0.0    0.0    0.0    4.       20.    0.0   4.5 AGE CLASS 4.5
   3    3.4   9.4    24.0   0.0    0.0    0.0    4.        5.    0.0   3.0
   4    3.4   9.4    29.5   0.0    0.0    0.0    5.       70.    0.0   3.5
   5    3.4   9.4    32.0   0.0    0.0    0.0    4.        5.    0.0   5.0 AGE CLASS 4.9
   6    3.4   9.4    36.0   0.0    0.0    0.0    4.        0.    0.0   4.0
   7    3.4   9.0    12.5   0.0    0.0    0.0    4.        0.    0.0   0.0
   8    3.4   0.0    20.0   0.0    0.0    0.0    5.       60.    0.0   0.0
   9    3.5   9.4    35.5   0.0    0.0    0.0    4.       20.    0.0   3.5
  10    3.5   9.4    32.0   0.0    0.0    0.0    4.        5.    0.0   3.5
  11    3.4   9.2    35.0   0.0    0.0    0.0    4.        5.    0.0   8.0 AGE CLASS 4.5
  12    3.4   9.4    15.5   0.0    0.0    0.0    5.        0.    0.0   4.0
  13    3.4   9.4    30.8   0.0    0.0    0.0    4.       10.    0.0   3.5
  14    3.4   9.4    34.0   0.0    0.0    0.0    4.        5.    0.0   3.5
  15    3.4   9.4    27.0   0.0    0.0    0.0    4.        5.    0.0   2.0
  16    3.4   9.4    23.0   0.0    0.0    0.0    4.        4.    0.0   4.0
  17    3.4   9.2    30.0   0.0    0.0    0.0    4.        5.    0.0   5.0
  18    3.4   9.4    37.0   0.0    0.0    0.0    4.        5.    0.0   5.5
  19    3.4   9.4    29.0   0.0    0.0    0.0    5.       25.    0.0   6.0
  20    3.4   9.4    35.5   0.0    0.0    0.0    4.        0.    0.0   5.0


   MEAN 3.4   9.3    28.5   0.0    0.0    0.0    4.       16.    0.0   4.2

STD DEV  .0    .1     6.9   0.0    0.0    0.0    0.       20.    0.0   1.5

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA UPPER GOVT   DATE 17 JUNE 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.4	9.1	23.5	0.0	0.0	0.0	0.	0.	0.0	1.5
2	3.4	9.4	20.0	0.0	0.0	0.0	0.	0.	0.0	4.5
3	3.5	9.4	25.0	0.0	0.0	0.0	0.	0.	0.0	3.4
4	3.4	9.4	25.5	0.0	0.0	0.0	0.	0.	0.0	3.8
5	3.4	9.4	29.0	0.0	0.0	0.0	0.	0.	0.0	5.5
6	3.4	9.4	31.0	0.0	0.0	0.0	0.	0.	0.0	3.5
7	3.5	9.1	20.5	0.0	0.0	0.0	0.	0.	0.0	1.0
8	3.4	9.1	21.0	0.0	0.0	0.0	0.	0.	0.0	1.5
9	3.5	9.4	32.5	0.0	0.0	0.0	0.	0.	0.0	4.5
10	3.5	9.4	36.0	0.0	0.0	0.0	0.	0.	0.0	4.0
11	3.5	9.3	33.0	0.0	0.0	0.0	0.	0.	0.0	8.5
12	3.4	9.4	17.5	0.0	0.0	0.0	0.	0.	0.0	4.5
13	3.5	9.4	35.5	0.0	0.0	0.0	0.	0.	0.0	3.5
14	3.4	9.4	44.5	0.0	0.0	0.0	0.	0.	0.0	4.0
15	3.4	9.4	25.5	0.0	0.0	0.0	0.	0.	0.0	2.5
16	3.4	9.4	23.5	0.0	0.0	0.0	0.	0.	0.0	4.5
17	3.4	9.4	30.5	0.0	0.0	0.0	0.	0.	0.0	5.5
18	3.5	9.4	37.0	0.0	0.0	0.0	0.	0.	0.0	6.5
19	3.4	9.4	27.5	0.0	0.0	0.0	0.	0.	0.0	6.5
20	3.4	9.4	27.5	0.0	0.0	0.0	0.	0.	0.0	5.0
MEAN	3.4	9.3	28.3	0.0	0.0	0.0	0.	0.	0.0	4.2
STD DEV	.0	.1	6.8	0.0	0.0	0.0	0.	0.	0.0	1.8

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMESIA TRIDENTATA   STUDY AREA UPPER GCVT          DATE 30  JUNE     1981
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 PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW    NEW
 NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH   VEG.   SEED
        VEG.  REPR.                                   CLASS   PERCENT  TWIG   STALK
                                                                       LNGTH  LNGTH
*****************************************************************************************
   1    4.6   0.0     28.0    0.0     0.0     0.0     0.       0.      0.0    0.0
   2    4.2   9.5     25.0    0.0     0.0     0.0     0.       0.      0.0    7.0
   3    4.2   9.4     21.0    0.0     0.0     0.0     0.       0.      0.0    5.0
   4    4.3   0.0     23.5    0.0     0.0     0.0     0.       0.      0.0    0.0
   5    4.3   9.5     32.0    0.0     0.0     0.0     0.       0.      0.0    0.0
   6    4.3   9.5     22.0    0.0     0.0     0.0     0.       0.      0.0    6.0
   7    4.3   9.5     19.0    0.0     0.0     0.0     0.       0.      0.0    5.5
   8    4.2   9.5     20.0    0.0     0.0     0.0     0.       0.      0.0    5.0
   9    4.2   9.5     39.0    0.0     0.0     0.0     0.       0.      0.0    2.0
  10    4.2   9.5     35.0    0.0     0.0     0.0     0.       0.      0.0    9.0
  11    4.2   9.5     34.0    0.0     0.0     0.0     0.       0.      0.0    5.0
  12    4.2   9.5     17.0    0.0     0.0     0.0     0.       0.      0.0   11.0
  13    4.1   9.5     31.0    0.0     0.0     0.0     0.       0.      0.0    5.0
  14    4.2   9.5     39.0    0.0     0.0     0.0     0.       0.      0.0    4.0
  15    4.2   9.5     38.0    0.0     0.0     0.0     0.       0.      0.0    4.0
  16    4.2   9.5     28.0    0.0     0.0     0.0     0.       0.      0.0    5.0
  17    4.2   9.5     32.0    0.0     0.0     0.0     0.       0.      0.0    6.0
  18    4.3   9.5     41.0    0.0     0.0     0.0     0.       0.      0.0    6.0
  19    4.2   9.6     33.0    0.0     0.0     0.0     0.       0.      0.0    9.0
  20    4.1   0.0     41.0    0.0     0.0     0.0     0.       0.      0.0    8.0
                                                                               0.0

   MEAN 4.2   9.5     29.9    0.0     0.0     0.0     0.       0.      0.0    6.0

STD DEV  .1    .0      7.7    0.0     0.0     0.0     0.       0.      0.0    2.2

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA UPPER GOVT          DATE 13  JULY    1981
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 PLANT PHENOLOGICAL  PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW    NEW
 NO.    STAGE SCORE  HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH    VEG.   SEED
        VEG.  REPR.                                  CLASS   PERCENT   TWIG   STALK
                                                                       LNGTH  LNGTH
*****************************************************************************************
    1     4.1   9.5   25.5    0.0     0.0     0.0    3.       25.       .5    0.0
    2     4.2   9.5   18.3    0.0     0.0     0.0    4.       21.       .2    0.0
    3     4.1   9.4   23.4    0.0     0.0     0.0    4.       23.       .4    0.0
    4     4.2   9.4   21.5    0.0     0.0     0.0    4.       20.      1.0    0.0
    5     4.2   9.4   28.2    0.0     0.0     0.0    4.       15.      1.2    0.0
    6     4.1   9.5   40.1    0.0     0.0     0.0    4.       10.       .6    0.0
    7     4.1   9.5   20.9    0.0     0.0     0.0    3.        5.       .1    0.0
    8     4.2   9.5   17.8    0.0     0.0     0.0    4.       22.      1.6    0.0
    9     4.1   9.5   35.7    0.0     0.0     0.0    4.        5.       .1    0.0
   10     4.2   9.5   34.3    0.0     0.0     0.0    4.        7.       .7    0.0
   11     4.1   9.5   36.0    0.0     0.0     0.0    4.       20.      1.5    0.0
   12     4.2   9.5   17.2    0.0     0.0     0.0    4.       15.       .6    0.0
   13     4.2   9.5   36.0    0.0     0.0     0.0    5.        3.       .2    0.0
   14     4.2   9.5   35.6    0.0     0.0     0.0    4.       12.      1.0    0.0
   15     4.2   9.5   26.0    0.0     0.0     0.0    3.       10.      1.0    0.0
   16     4.2   9.5   30.0    0.0     0.0     0.0    4.       10.      1.1    0.0
   17     4.2   9.4   33.5    0.0     0.0     0.0    4.       15.       .9    0.0
   18     4.1   9.5   39.0    0.0     0.0     0.0    4.        2.       .9    0.0
   19     4.2   9.5   25.0    0.0     0.0     0.0    5.       40.      1.6    0.0
   20     4.0   9.4   37.5    0.0     0.0     0.0    4.        7.      1.1    0.0

   MEAN   4.2   9.5   29.1    0.0     0.0     0.0    4.       14.       .8    0.0

 STD DEV   .1    .0    7.6    0.0     0.0     0.0    1.        9.       .5    0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA UPPER GOVT          DATE 31  JULY     1981
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  PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT  DEAD     NEW   NEW
  NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                               CLASS  PERCENT  TWIG  STALK
                                                                  LNGTH LNGTH
*******************************************************************************
    1    4.3   9.4    25.6    0.0    0.0    0.0    3.     20.      .3   4.0
    2    4.6   9.5    28.4    0.0    0.0    0.0    4.     30.      .6   8.8
    3    4.5   9.4    27.2    0.0    0.0    0.0    4.     15.      .5   5.4
    4    4.4   9.4    30.5    0.0    0.0    0.0    5.     60.      .4   5.6
    5    4.6   9.5    34.3    0.0    0.0    0.0    5.     16.      .5   7.9
    6    4.5   9.5    38.2    0.0    0.0    0.0    4.      8.      .6   5.1
    7    4.2   9.5    20.9    0.0    0.0    0.0    3.      6.      .3   5.2
    8    4.1   9.5    20.6    0.0    0.0    0.0    5.     50.      .3   2.9
    9    4.6   9.5    48.0    0.0    0.0    0.0    4.     10.      .5   8.5
   10    4.4   9.5    37.7    0.0    0.0    0.0    4.     12.      .4   7.6
   11    4.5   9.5    35.6    0.0    0.0    0.0    3.     15.      .5  10.7
   12    4.2   9.5    18.8    0.0    0.0    0.0    3.     40.      .3   4.6
   13    4.3   9.5    39.5    0.0    0.0    0.0    4.      5.      .6   4.5
   14    4.4   9.5    40.8    0.0    0.0    0.0    4.     16.      .5   7.6
   15    4.2   9.5    26.8    0.0    0.0    0.0    3.     18.      .4   3.6
   16    4.4   9.5    32.5    0.0    0.0    0.0    3.     10.      .5   6.5
   17    4.4   9.5    33.0    0.0    0.0    0.0    4.      9.      .6   6.2
   18    4.6   9.5    36.3    0.0    0.0    0.0    4.      7.      .7   9.6
   19    4.2   9.6    32.4    0.0    0.0    0.0    4.     70.      .3   8.6 DECADENT
   20    4.3   9.5    38.0    0.0    0.0    0.0    4.     10.      .5   6.8


   MEAN  4.4   9.5    32.3    0.0    0.0    0.0    4.     21.      .5   6.5

 STD DEV  .2    .0     7.5    0.0    0.0    0.0    1.     19.      .1   2.1

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA STUDY AREA UPPER GOVT DATE 10 AUGUST 1981

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.4	9.5	24.0	0.0	0.0	0.0	0.	0.	2.5	2.0
2	4.6	9.5	29.5	0.0	0.0	0.0	0.	0.	0.0	5.5
3	4.5	9.5	28.5	0.0	0.0	0.0	0.	0.	.5	4.0
4	4.4	9.4	30.0	0.0	0.0	0.0	0.	0.	.5	5.5
5	4.6	9.5	33.5	0.0	0.0	0.0	0.	0.	0.0	7.0
6	4.5	9.4	37.0	0.0	0.0	0.0	0.	0.	.5	2.0
7	4.2	9.5	21.0	0.0	0.0	0.0	0.	0.	0.0	2.0
8	4.2	9.5	22.0	0.0	0.0	0.0	0.	0.	0.0	8.0
9	4.6	9.5	38.0	0.0	0.0	0.0	0.	0.	.5	8.0
10	4.4	9.5	34.0	0.0	0.0	0.0	0.	0.	.5	4.5
11	4.5	9.5	34.0	0.0	0.0	0.0	0.	0.	1.0	10.3
12	4.4	9.5	14.0	0.0	0.0	0.0	0.	0.	1.0	4.7
13	4.3	9.5	35.3	0.0	0.0	0.0	0.	0.	.5	5.0
14	4.4	9.5	36.5	0.0	0.0	0.0	0.	0.	1.0	7.5
15	4.2	9.5	25.5	0.0	0.0	0.0	0.	0.	0.0	3.0
16	4.3	9.6	34.0	0.0	0.0	0.0	0.	0.	1.0	6.5
17	4.4	9.4	31.0	0.0	0.0	0.0	0.	0.	0.0	4.0
18	4.6	9.3	38.5	0.0	0.0	0.0	0.	0.	1.0	7.0
19	4.3	9.6	31.0	0.0	0.0	0.0	0.	0.	.3	9.0
20	4.4	0.0	38.0	0.0	0.0	0.0	0.	0.	1.0	0.0
MEAN	4.4	9.5	30.8	0.0	0.0	0.0	0.	0.	.8	5.7
STD DEV	.1	.1	6.6	0.0	0.0	0.0	0.	0.	.5	2.5

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMESIA TRIDENTATA    STUDY AREA UPPER GOVT          DATE 24  AUGUST   1981
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 PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW    NEW
 NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH   VEG.   SEED
       VEG.  REPR.                                    CLASS   PERCENT  TWIG   STALK
                                                                       LNGTH  LNGTH
*******************************************************************************************
    1     4.6   9.4    25.6    0.0     0.0     0.0    0.          0.    0.0    8.0
    2     4.6   9.5    22.5    0.0     0.0     0.0    0.          0.    0.0    8.4
    3     4.6   9.5    27.6    0.0     0.0     0.0    0.          0.    0.0    5.1
    4     4.6   9.5    24.1    0.0     0.0     0.0    0.          0.    0.0    6.4  DECADENT
    5     4.6   9.5    34.3    0.0     0.0     0.0    0.          0.    0.0    6.7
    6     4.6   9.5    38.9    0.0     0.0     0.0    0.          0.    0.0    4.8
    7     4.5   9.5    19.7    0.0     0.0     0.0    0.          0.    0.0    2.9
    8     4.4   9.5    22.6    0.0     0.0     0.0    0.          0.    0.0    3.0
    9     4.6   9.5    39.0    0.0     0.0     0.0    0.          0.    0.0    6.2
   10     4.6   9.5    36.0    0.0     0.0     0.0    0.          0.    0.0    5.0
   11     4.6   9.5    34.0    0.0     0.0     0.0    0.          0.    0.0   11.5
   12     4.5   9.5    20.3    0.0     0.0     0.0    0.          0.    0.0    5.5
   13     4.6   9.5    37.0    0.0     0.0     0.0    0.          0.    0.0    5.2
   14     4.5   9.5    42.2    0.0     0.0     0.0    0.          0.    0.0    4.6
   15     4.3   9.5    26.8    0.0     0.0     0.0    0.          0.    0.0    4.2
   16     4.6   9.5    27.5    0.0     0.0     0.0    0.          0.    0.0    8.0
   17     4.5   9.5    32.4    0.0     0.0     0.0    0.          0.    0.0    4.8
   18     4.6   9.5    39.0    0.0     0.0     0.0    0.          0.    0.0    9.9
   19     4.5   9.5    31.6    0.0     0.0     0.0    0.          0.    0.0    9.7
   20     4.6   9.5    39.3    0.0     0.0     0.0    0.          0.    0.0    5.5


   MEAN   4.6   9.5    31.0    0.0     0.0     0.0    0.          0.    0.0    6.3

STD DEV    .1    .0     7.1    0.0     0.0     0.0    0.          0.    0.0    2.3

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMESIA TRIDENTATA   STUDY AREA UPPER GOVT        DATE 11  SEPT      1981
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 PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD     NEW    NEW
 NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH    VEG.   SEED
        VEG.  REPR.                               CLASS  PERCENT   TWIG   STALK
                                                                   LNGTH  LNGTH
*******************************************************************************
   1     4.8   0.0    23.0    0.0    0.0    0.0    0.      0.        .3    0.0
   2     4.8   9.6    24.2    0.0    0.0    0.0    0.      0.       1.0    6.8
   3     4.8   9.7    27.6    0.0    0.0    0.0    0.      0.        .2    4.3
   4     4.7   9.7    28.2    0.0    0.0    0.0    0.      0.        .4    6.0
   5     4.9   9.8    30.0    0.0    0.0    0.0    0.      0.       1.0    7.3
   6     4.8   9.7    32.0    0.0    0.0    0.0    0.      0.        .5    4.8
   7     4.8   0.0    18.5    0.0    0.0    0.0    0.      0.        .8    0.0
   8     4.7   0.0    19.8    0.0    0.0    0.0    0.      0.       1.0    0.0
   9     4.9  10.5    36.0    0.0    0.0    0.0    0.      0.       1.2    6.7
  10     4.9  11.0    36.4    0.0    0.0    0.0    0.      0.        .5    7.0
  11     4.8   9.8    35.0    0.0    0.0    0.0    0.      0.       1.0   11.0
  12     4.8   9.7    18.0    0.0    0.0    0.0    0.      0.       1.0    5.0
  13     4.9   9.6    35.0    0.0    0.0    0.0    0.      0.        .8    4.0
  14     4.9   9.8    39.5    0.0    0.0    0.0    0.      0.        .6    3.2
  15     4.8   9.7    23.2    0.0    0.0    0.0    0.      0.        .4    2.8
  16     4.8   9.9    28.8    0.0    0.0    0.0    0.      0.        .4    6.6
  17     4.9   9.8    32.0    0.0    0.0    0.0    0.      0.        .3    7.4
  18     4.7   9.8    42.0    0.0    0.0    0.0    0.      0.        .6    5.3
  19     4.9   9.9    30.2    0.0    0.0    0.0    0.      0.        .5    8.7
  20     4.9   0.0    38.0    0.0    0.0    0.0    0.      0.        .5    0.0


   MEAN  4.8   9.9    29.9    0.0    0.0    0.0    0.      0.        .6    6.1

 STD DEV  .1    .4     7.1    0.0    0.0    0.0    0.      0.        .3    2.1

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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TABLE V. Average phenological development for 1981 for the prime species for the sampling dates.

Page

Agropyron smithii

Bud Kimball Exclosure 389
Cumberland # 3 Exclosure 390
Demer Exclosure 391
Farson Exclosure 392
Horse Creek Exclosure 393
Mesa Antelope Exclosure 394
Owl Draw Exclosure 395
Red Wash # 2 Exclosure 396
Shoshoni # 7 Exclosure 397
Sweetwater Exclosure 398
Upper Government Draw Exclosure 399

Agropyron spicatum

Bud Kimball Exclosure 400
Cedar Mountain Exclosure 401
Cumberland # 3 Exclosure 402
Demer Exclosure 403
Horse Creek Exclosure 404
Owl Draw Exclosure 405
Red Wash # 2 Exclosure 406

Artemisia nova

Horse Creek exclosure 407
Owl Draw Exclosure 408
Sweetwater Exclosure 409

Artemisia tridentata

Bud Kimball Exclosure 410
Cedar Mountain Exclosure 411
Cumberland # 3 Exclosure 412
Demer Exclosure 413
Farson Exclosure 414
Horse Creek Exclosure 415
Mesa Antelope Exclosure 416
Owl Draw Exclosure 417
Red Wash # 2 Exclosure 418
Shoshoni # 7 Exclosure 419
Sweetwater Exclosure 420
Upper Government Draw Exclosure 421

AGROPYRON SMITHII   STUDY AREA BUD KIMBAL

DATE	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
2 MAY 1981	4.2	0.0	.2	12.4	0.0	0.0	1.7
19 MAY 1981	4.7	0.0	.3	15.0	0.0	0.0	1.4
2 JUNE 1981	5.1	0.0	.3	17.9	0.0	0.0	1.3
17 JUNE 1981	5.7	0.0	.3	17.4	0.0	0.0	1.3
29 JUNE 1981	5.9	0.0	.2	17.5	0.0	0.0	0.0
14 JULY 1981	6.4	0.0	.1	18.5	0.0	0.0	1.2
28 JULY 1981	6.4	0.0	.2	18.1	0.0	0.0	1.1
11 AUGUST 1981	6.6	0.0	.1	14.9	0.0	0.0	0.0
25 AUGUST 1981	6.6	0.0	.1	16.5	0.0	0.0	0.0
12 SEPT 1981	7.1	0.0	0.0	0.0	0.0	0.0	0.0

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    AGROPYRON SMITHII   STUDY AREA  NUMBER. 3
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       DATE                   PHENOLOGICAL    MAX.    MAX.    MAX.     NOS.   NOS.
                              STAGE  SCORE    LEAF    LEAF    SPIKE    SPK/   VEG.
                               VEG.  REPR.    WIDTH   HGHT.   HGHT.    CULM   PLANT
*************************************************************************************

 02   MAY     1981             4.5    0.0       .2    14.5    0.0      0.0    2.8

 26   MAY     1981             4.2    0.0       .2    18.9    0.0      0.0    2.1

 05   JUNE    1981             4.9    0.0       .3    21.6    0.0      0.0    2.3

 16   JUNE    1981             5.1    0.0       .3    23.4    0.0      0.0    2.2

 30   JUNE    1981             5.6    0.0       .2    21.2    0.0      0.0    0.0

 14   JULY    1981             6.2    0.0     0.0     21.4    0.0      0.0    0.0

 28   JULY    1981             6.2    0.0       .1    22.9    0.0      0.0    0.0

 11   AUGUST  1981             6.8    0.0       .1    23.3    0.0      0.0    0.0

 25   AUGUST  1981             6.9    0.0     0.0     21.8    0.0      0.0    0.0

 13   SEPT    1981             6.9    0.0     0.0     21.9    0.0      0.0    0.0
```

AGROPYRON SMITHII STUDY AREA DEMER

DATE			PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
2	MAY	1981	4.5	0.0	.1	14.9	0.0	0.0	1.4
20	MAY	1981	5.2	0.0	.2	17.2	0.0	0.0	1.4
2	JUNE	1981	5.6	0.0	.3	18.7	0.0	0.0	1.6
17	JUNE	1981	5.9	0.0	0.0	20.0	0.0	0.0	0.0
29	JUNE	1981	6.0	0.0	.2	20.1	0.0	0.0	0.0
14	JULY	1981	6.2	0.0	.1	20.5	0.0	0.0	0.0
28	JULY	1981	6.5	0.0	0.0	19.9	0.0	0.0	0.0
11	AUGUST	1981	6.5	16.0	.1	18.8	34.0	0.0	0.0
25	AUGUST	1981	6.6	0.0	.1	19.9	0.0	0.0	0.0
12	SEPT	1981	7.2	0.0	0.0	0.0	0.0	0.0	0.0

AGROPYRON SMITHII   STUDY AREA FARSON

DATE			PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
02	MAY	1981	4.2	0.0	.1	11.0	0.0	0.0	1.3
26	MAY	1981	4.5	9.0	.2	16.6	0.0	0.0	2.1
05	JUNE	1981	4.9	0.0	.3	18.5	0.0	0.0	2.4
16	JUNE	1981	5.0	0.0	.3	20.1	0.0	0.0	2.3
30	JUNE	1981	5.3	0.0	.2	19.4	0.0	0.0	0.0
14	JULY	1981	6.2	0.0	0.0	18.7	0.0	0.0	0.0
28	JULY	1981	6.1	0.0	.1	19.9	0.0	0.0	0.0
11	AUGUST	1981	6.6	0.0	.2	19.0	0.0	0.0	0.0
24	AUGUST	1981	6.6	0.0	.1	20.1	0.0	0.0	0.0
12	SEPT	1981	6.8	18.0	0.0	18.4	34.1	0.0	0.0

AGROPYRON SMITHII   STUDY AREA HORSE CR.

DATE	PHENOLOGICAL STAGE VEG.	PHENOLOGICAL SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
02 MAY 1981	4.4	0.0	0.0	12.5	0.0	0.0	0.0
19 MAY 1981	5.0	0.0	.3	15.6	0.0	0.0	1.4
3 JUNE 1981	5.3	0.0	.3	18.1	0.0	0.0	1.5
16 JUNE 1981	5.7	10.3	.4	21.8	22.1	0.0	1.4
29 JUNE 1981	6.0	11.1	.4	22.8	34.3	0.0	0.0
14 JULY 1981	6.2	13.5	.3	22.6	35.3	9.0	1.3
28 JULY 1981	6.4	15.9	0.0	21.8	33.6	0.0	0.0
11 AUGUST 1981	6.5	16.2	.2	21.0	33.9	0.0	0.0
25 AUGUST 1981	6.5	16.6	.2	20.1	33.7	0.0	0.0
12 SEPT 1981	6.9	0.0	0.0	0.0	0.0	0.0	0.0

AGROPYRON SMITHII STUDY AREA MESA ANT

DATE			PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
02	MAY	1981	3.6	0.0	.1	9.6	0.0	0.0	1.6
26	MAY	1981	4.4	0.0	.2	12.9	0.0	0.0	1.5
05	JUNE	1981	4.8	0.0	.2	15.5	0.0	0.0	1.5
16	JUNE	1981	4.9	10.1	.2	16.3	21.2	0.0	1.4
30	JUNE	1981	5.7	10.5	.2	15.7	0.0	0.0	0.0
14	JULY	1981	6.3	16.1	0.0	14.5	25.5	1.0	1.0
28	JULY	1981	6.3	0.0	.1	15.2	25.0	0.0	0.0
11	AUGUST	1981	6.5	16.5	.1	15.5	25.8	0.0	1.2
24	AUGUST	1981	6.7	16.9	.1	14.5	25.5	0.0	0.0
12	SEPT	1981	6.9	0.0	0.0	15.0	0.0	0.0	0.0

AGROPYRON SMITHII   STUDY AREA OWL DRAW

DATE			PHENOLOGICAL STAGE SCORE VEG.	REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
2	MAY	1981	4.1	0.0	0.0	10.0	0.0	0.0	0.0
25	MAY	1981	4.4	0.0	.3	15.3	0.0	0.0	1.4
8	JUNE	1981	5.2	0.0	.3	15.6	0.0	0.0	1.3
15	JUNE	1981	5.5	0.0	.4	15.5	0.0	0.0	1.3
28	JUNE	1981	5.9	0.0	0.0	15.7	0.0	0.0	0.0
13	JULY	1981	6.0	0.0	.3	14.6	0.0	0.0	0.0
27	JULY	1981	6.0	0.0	.2	15.6	0.0	0.0	1.4
10	AUGUST	1981	6.3	0.0	0.0	14.5	0.0	0.0	0.0
24	AUGUST	1981	6.4	0.0	.2	16.3	0.0	0.0	0.0
11	SEPT	1981	6.8	18.0	0.0	0.0	0.0	0.0	0.0

AGROPYRON SMITHII   STUDY AREA RED WASH 2

DATE			PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
01	MAY	1981	4.0	0.0	.2	11.3	0.0	0.0	3.1
04	JUNE	1981	4.0	0.0	.2	15.4	0.0	0.0	0.0
15	JUNE	1981	4.6	9.0	.2	17.8	19.8	0.0	2.0
29	JUNE	1981	5.2	9.0	.2	17.8	0.0	0.0	0.0
13	JULY	1981	6.1	0.0	0.0	16.7	0.0	0.0	0.0
27	JULY	1981	6.1	0.0	.1	16.4	0.0	0.0	0.0
10	AUGUST	1981	6.4	0.0	.1	16.9	0.0	0.0	0.0
25	AUGUST	1981	6.4	16.9	0.0	16.2	33.3	0.0	0.0
13	SEPT	1981	6.7	0.0	0.0	16.5	0.0	0.0	0.0

AGROPYRON SMITHII   STUDY AREA SHOSHONI 7

DATE	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1 MAY 1981	3.9	0.0	.2	11.1	0.0	0.0	1.3
20 MAY 1981	4.8	0.0	.3	14.0	0.0	0.0	1.2
3 JUNE 1981	5.2	0.0	.3	14.8	0.0	0.0	1.2
18 JUNE 1981	5.9	0.0	0.0	15.6	0.0	0.0	0.0
30 JUNE 1981	6.0	0.0	0.0	15.3	0.0	0.0	0.0
13 JULY 1981	6.3	0.0	.2	15.2	0.0	0.0	1.2
27 JULY 1981	6.3	0.0	0.0	15.6	0.0	0.0	0.0
10 AUGUST 1981	6.3	0.0	.2	14.7	0.0	0.0	0.0
24 AUGUST 1981	6.5	0.0	.2	14.9	0.0	0.0	0.0
11 SEPT 1981	7.2	0.0	0.0	0.0	0.0	0.0	0.0

AGROPYRON SMITHII STUDY AREA SWEETWATER

DATE			PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
21	MAY	1981	4.6	0.0	.2	16.2	0.0	0.0	2.0
25	MAY	1981	4.8	9.0	.2	17.6	0.0	0.0	1.9
09	JUNE	1981	5.4	9.0	.3	18.9	0.0	0.0	1.6
17	JUNE	1981	5.6	0.0	.3	19.7	0.0	0.0	1.8
1	JULY	1981	5.6	0.0	.2	18.7	0.0	0.0	0.0
15	JULY	1981	6.2	14.2	0.0	17.7	33.5	7.0	0.0
29	JULY	1981	6.2	14.8	.1	17.7	34.0	0.0	0.0
12	AUGUST	1981	6.3	16.5	.1	19.3	34.0	0.0	2.3
24	AUGUST	1981	6.7	0.0	0.0	17.5	35.0	0.0	0.0
12	SEPT	1981	6.7	0.0	0.0	17.3	0.0	0.0	0.0

AGROPYRON SMITHII STUDY AREA UPPER GOV

DATE			PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	MAY	1981	4.4	0.0	.2	14.2	0.0	0.0	1.8
25	MAY	1981	4.6	0.0	.2	17.7	0.0	0.0	1.4
06	JUNE	1981	5.3	0.0	.2	19.3	0.0	0.0	1.4
17	JUNE	1981	5.5	0.0	.3	19.6	0.0	0.0	1.6
30	JUNE	1981	6.0	0.0	0.0	19.2	0.0	0.0	0.0
13	JULY	1981	6.2	0.0	.1	19.0	0.0	0.0	1.2
31	JULY	1981	6.6	0.0	.2	20.1	0.0	0.0	0.0
10	AUGUST	1981	6.8	0.0	.1	17.7	0.0	0.0	0.0
24	AUGUST	1981	6.8	0.0	0.0	19.7	0.0	0.0	0.0
11	SEPT	1981	7.0	0.0	0.0	0.0	0.0	0.0	0.0

AGROPYRON SPICATUM STUDY AREA BUD KIMBAL

DATE			PHENOLOGICAL STAGE SCORE		CLUMP			MAX.	MAX.	MAX.	NO.	NO.	NO.
			VEG.	REPR.	LGTH.	WIDTH	DIAM.	LEAF WIDTH	LEAF HGHT	SPK HGHT	SPL/ CULM	REPR CULM	VEG CULM
19	MAY	1981	5.0	9.0	12.8	8.5	0.0	.3	27.2	0.0	0.	7.	71.
02	JUNE	1981	5.3	9.5	0.0	0.0	0.0	0.0	31.7	0.0	0.	0.	0.
17	JUNE	1981	6.0	11.1	0.0	0.0	0.0	.3	33.7	49.3	6.	0.	0.
29	JUNE	1981	6.0	16.1	0.0	0.0	0.0	0.0	29.2	46.6	0.	0.	0.
14	JULY	1981	6.4	16.1	0.0	0.0	0.0	0.0	29.6	47.8	0.	5.	87.
28	JULY	1981	6.4	16.3	0.0	0.0	0.0	0.0	27.8	45.9	0.	0.	0.
11	AUGUST	1981	6.4	16.4	0.0	0.0	0.0	.1	27.7	45.2	0.	0.	0.
25	AUGUST	1981	6.7	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
12	SEPT	1981	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.

0.0 = NOT RECORDED

AGROPYRON SPICATUM STUDY AREA CEDAR MTN

DATE			PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
01	MAY	1981	4.7	0.0	23.4	13.5	0.0	.2	14.2	0.0	0.	0.	0.
27	MAY	1981	4.9	0.0	11.1	4.9	0.0	.2	15.6	0.0	0.	0.	86.
01	JUNE	1981	5.2	9.6	0.0	0.0	0.0	.3	18.2	0.0	0.	0.	0.
15	JUNE	1981	5.3	10.0	0.0	0.0	0.0	.3	18.7	0.0	0.	7.	0.
29	JUNE	1981	5.5	10.3	23.6	0.0	0.0	.2	0.0	0.0	5.	5.	0.
13	JULY	1981	6.0	16.3	0.0	0.0	0.0	.2	21.2	39.4	6.	4.	0.
27	JULY	1981	6.4	16.5	0.0	0.0	0.0	.1	20.9	42.7	0.	0.	0.
10	AUGUST	1981	6.5	16.8	0.0	0.0	0.0	0.0	22.2	35.6	0.	5.	0.
25	AUGUST	1981	6.9	16.9	0.0	4.5	0.0	0.0	19.7	35.3	0.	0.	0.
13	SEPT	1981	6.9	16.9	0.0	0.0	0.0	0.0	20.6	42.5	0.	0.	0.

0.0 = NOT RECORDED

```
   AGROPYRON SPICATUM    STUDY AREA  CUMBER. 3
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         DATE              PHENOLOGICAL              CLUMP         MAX.   MAX.   MAX.   NO.    NO.    NO.
                           STAGE  SCORE    LGTH.  WIDTH   DIAM.    LEAF   LEAF   SPK    SPL/   REPR   VEG
                           VEG.   REPR.                            WIDTH  HGHT   HGHT   CULM   CULM   CULM
*******************************************************************************************************

      02   MAY      1981   4.6       9.3   12.2     8.4      0.0    .2    19.9    0.0   0.     0.     0.
      26   MAY      1981   4.6       0.0   10.7     6.1      0.0    .3    28.9    0.0   0.     0.    80.
      05   JUNE     1981   5.1       9.8    0.0     0.0      0.0    .3    34.9   31.0   0.     0.     0.
      16   JUNE     1981   5.4      10.2    0.0     0.0      0.0   0.0    36.0   44.0   0.     6.     0.
      30   JUNE     1981   5.5      10.2    0.0     0.0      0.0   0.0    36.0   43.5   0.     6.     0.
      14   JULY     1981   6.1      16.5    0.0     0.0      0.0   0.0    36.0   47.8   6.     5.     0.
      28   JULY     1981   6.3      16.6    0.0     0.0      0.0    .1    33.5   40.4   0.     0.     0.
      11   AUGUST   1981   6.7      16.9    0.0     0.0      0.0   0.0    35.2   43.0   0.     0.     0.
      25   AUGUST   1981   6.7      16.9    0.0     0.0      0.0   0.0    34.2   42.1   0.     0.     0.
      13   SEPT     1981   6.8      16.9    0.0     0.0      0.0   0.0    36.1   44.2   0.     0.     0.

       0.0 = NOT RECORDED
```

AGROPYRON SPICATUM   STUDY AREA DEMER

DATE			PHENOLOGICAL STAGE SCORE			CLUMP		MAX. LEAF	MAX. LEAF	MAX. SPK	NO. SPL/	NO. REPR	NO. VEG
			VEG.	REPR.	LGTH.	WIDTH	DIAM.	WIDTH	HGHT	HGHT	CULM	CULM	CULM
2	MAY	1981	4.8	9.1	0.0	0.0	0.0	.2	24.6	0.0	0.	0.	132.
20	MAY	1981	5.2	9.6	22.3	13.0	0.0	.3	33.4	30.7	0.	29.	0.
2	JUNE	1981	5.7	10.6	0.0	0.0	0.0	4.2	40.2	44.0	0.	93.	0.
17	JUNE	1981	6.0	13.1	0.0	0.0	0.0	.4	36.6	58.7	8.	0.	0.
29	JUNE	1981	6.2	16.7	0.0	0.0	0.0	0.0	35.3	58.2	0.	0.	0.
14	JULY	1981	6.2	16.7	0.0	0.0	0.0	.2	31.8	54.6	7.	24.	0.
28	JULY	1981	6.3	16.8	0.0	0.0	0.0	0.0	34.1	55.7	0.	0.	0.
11	AUGUST	1981	6.4	16.8	0.0	0.0	0.0	.2	32.8	54.0	0.	0.	0.
25	AUGUST	1981	6.5	16.8	0.0	0.0	0.0	0.0	30.7	47.1	0.	0.	0.
12	SEPT	1981	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.

0.0 = NOT RECORDED

AGROPYRON SPICATUM   STUDY AREA HORSE CK.

DATE			PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
2	MAY	1981	4.7	0.0	0.0	0.0	0.0	0.0	10.3	0.0	0.	0.	0.
19	MAY	1981	5.3	10.1	7.2	4.8	0.0	.3	18.9	17.8	0.	10.	37.
3	JUNE	1981	5.5	10.2	0.0	0.0	0.0	0.0	22.6	35.1	0.	0.	0.
16	JUNE	1981	5.7	10.5	0.0	0.0	0.0	.3	23.2	42.1	0.	0.	0.
29	JUNE	1981	5.9	14.1	0.0	0.0	0.0	.4	25.1	46.4	1.	19.	0.
14	JULY	1981	6.1	14.4	0.0	0.0	0.0	.3	21.5	47.0	7.	0.	0.
28	JULY	1981	6.2	15.0	0.0	0.0	0.0	0.0	20.7	38.9	0.	10.	0.
11	AUGUST	1981	6.4	16.6	0.0	0.0	0.0	.2	19.5	41.3	0.	0.	0.
25	AUGUST	1981	6.5	16.9	0.0	0.0	0.0	.2	20.7	45.1	0.	0.	0.
12	SEPT	1981	6.9	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.

0.0 = NOT RECORDED

AGROPYRON SPICATUM   STUDY AREA OWL DRAW

DATE	PHENOLOGICAL STAGE SCORE VEG.	REPR.	CLUMP LGTH.	WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. RFPR CULM	NO. VEG CULM
2 MAY 1981	4.4	0.0	0.0	0.0	0.0	0.0	7.6	0.0	0.	0.	0.
25 MAY 1981	4.8	0.0	1.4	.7	0.0	.3	11.5	0.0	0.	0.	3.
15 JUNE 1981	5.6	0.0	2.7	1.8	0.0	.3	14.2	0.0	0.	0.	6.
28 JUNE 1981	5.9	10.0	0.0	0.0	0.0	.2	14.4	0.0	0.	0.	7.
13 JULY 1981	6.0	0.0	0.0	0.0	0.0	.3	13.4	0.0	0.	0.	0.
27 JULY 1981	6.2	0.0	0.0	0.0	0.0	0.0	14.3	0.0	0.	0.	0.
10 AUGUST 1981	6.2	16.0	0.0	0.0	0.0	0.0	14.1	23.0	0.	0.	0.
24 AUGUST 1981	6.5	16.9	0.0	0.0	0.0	0.0	14.6	28.1	0.	0.	0.
11 SEPT 1981	6.8	17.7	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.

0.0 = NOT RECORDED

AGROPYRON SPICATUM STUDY AREA RED WASH

DATE			PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
01	MAY	1981	4.5	0.0	39.9	22.6	0.0	.2	15.3	0.0	0.	0.	0.
04	JUNE	1981	5.5	9.9	29.0	22.8	0.0	0.0	25.5	0.0	0.	0.	147.
15	JUNE	1981	5.6	10.1	0.0	0.0	0.0	0.0	36.3	40.9	0.	13.	0.
29	JUNE	1981	5.7	10.3	0.0	0.0	0.0	0.0	35.8	48.1	0.	25.	0.
13	JULY	1981	5.8	15.2	0.0	0.0	0.0	.3	23.9	52.0	0.	0.	0.
27	JULY	1981	6.1	15.9	0.0	0.0	0.0	.2	33.9	44.8	0.	0.	0.
10	AUGUST	1981	6.5	16.5	0.0	0.0	0.0	.2	30.7	44.4	6.	0.	0.
25	AUGUST	1981	6.5	16.5	0.0	3.8	.5	0.0	0.0	0.0	0.	0.	0.
13	SEPT	1981	6.5	16.6	0.0	0.0	0.0	0.0	35.9	49.6	0.	0.	0.

0.0 = NOT RECORDED

ARTEMISIA NOVA STUDY AREA HORSE CK.

DATE			PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
2	MAY	1981	2.9	9.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
19	MAY	1981	3.2	9.1	21.6	40.0	28.9	0.0	0.	0.	0.0	0.0
03	JUNE	1981	3.3	9.4	26.9	0.0	0.0	0.0	0.	0.	0.0	0.0
16	JUNE	1981	3.6	9.5	30.9	0.0	0.0	0.0	4.	32.	0.0	15.0
29	JUNE	1981	4.2	9.6	35.6	0.0	0.0	0.0	0.	0.	0.0	17.7
14	JULY	1981	4.3	9.6	36.5	0.0	0.0	0.0	4.	27.	2.7	18.7
28	JULY	1981	4.3	9.6	35.9	0.0	0.0	0.0	4.	20.	.6	0.0
11	AUGUST	1981	4.3	9.6	33.8	0.0	0.0	0.0	0.	0.	.5	17.6
25	AUGUST	1981	4.5	9.8	35.2	0.0	0.0	0.0	0.	0.	0.0	18.0
12	SEPT	1981	5.1	10.8	37.0	0.0	0.0	0.0	0.	0.	2.9	14.3

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    ARTEMISIA NOVA           STUDY AREA  OWL DRAW
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            DATE        PHENOLOGICAL    PLANT   PLANT   PLANT   PLANT     PLANT   DEAD     NEW    NEW
                        STAGE SCORE     HGHT    LNGTH   WIDTH   DIAM      AGE     BRANCH   VEG.   SEED
                         VEG.  REPR.                                      CLASS   PERCENT  TWIG   STALK
                                                                                           LNGTH  LNGTH
*************************************************************************************************************
  1  MAY        1981   2.9    0.0       0.0     0.0     0.0     0.0     0.         0.      0.0    0.0
 25  MAY        1981   3.1    9.0       9.9    21.3    18.8     0.0     0.         0.      0.0    0.0
 08  JUNE       1981   3.3    9.3      11.8     0.0     0.0     0.0     4.        23.      0.0    0.0
 15  JUNE       1981   3.6    9.4      12.1     0.0     0.0     0.0     0.         0.      0.0    6.2
 28  JUNE       1981   4.1    9.6      13.7     0.0     0.0     0.0     0.         0.      0.0    8.8
 13  JULY       1981   4.1    9.6      10.8     0.0     0.0     0.0     3.        16.      0.0   10.2
 27  JULY       1981   4.3    9.6      13.0     0.0     0.0     0.0     0.         0.      0.0    8.8
 10  AUGUST     1981   4.3    9.6      15.0     0.0     0.0     0.0     0.         0.      0.0   10.2
 24  AUGUST     1981   4.5    9.6      15.2     0.0     0.0     0.0     0.         0.      0.0    9.5
 11  SEPT       1981   4.8   13.1      14.4     0.0     0.0     0.0     0.         0.       .3   10.8
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ARTEMISIA NOVA STUDY AREA SWEETWATER

DATE	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
25 MAY 1981	3.3	9.0	9.4	32.4	19.7	0.0	0.	84.	0.0	0.0
09 JUNE 1981	3.5	9.4	12.3	0.0	0.0	0.0	4.	27.	0.0	3.9
17 JUNE 1981	3.5	9.4	14.3	0.0	0.0	0.0	0.	0.	0.0	4.9
01 JULY 1981	4.2	9.6	16.7	0.0	0.0	0.0	0.	0.	0.0	8.4
15 JULY 1981	4.2	9.6	14.4	0.0	0.0	0.0	0.	0.	0.0	7.4
29 JULY 1981	4.2	9.6	16.4	0.0	0.0	0.0	0.	0.	1.0	8.2
12 AUGUST 1981	4.3	9.6	12.8	0.0	0.0	0.0	0.	0.	0.0	8.5
24 AUGUST 1981	4.4	9.7	17.4	0.0	0.0	0.0	0.	0.	.8	8.5
12 SEPT 1981	4.9	11.5	15.7	0.0	0.0	0.0	0.	0.	.7	8.5

ARTEMESIA TRIDENTATA   STUDY AREA   BUD KIMBAL

DATE	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
2 MAY 1981	2.9	9.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
19 MAY 1981	3.2	9.0	20.2	35.0	19.6	0.0	0.	0.	0.0	0.0
02 JUNE 1981	3.3	9.3	21.2	0.0	0.0	0.0	0.	0.	0.0	0.0
17 JUNE 1981	3.8	9.5	23.8	0.0	0.0	0.0	4.	29.	0.0	7.7
29 JUNE 1981	4.2	9.6	24.5	0.0	0.0	0.0	0.	0.	0.0	8.1
14 JULY 1981	4.4	9.6	24.4	18.0	10.0	0.0	4.	33.	1.1	7.5
28 JULY 1981	4.4	9.6	26.2	16.5	7.5	0.0	5.	95.	0.0	7.9
11 AUGUST 1981	4.4	9.6	23.5	0.0	0.0	0.0	0.	0.	1.4	8.4
25 AUGUST 1981	4.5	9.6	24.9	0.0	0.0	0.0	0.	0.	0.0	6.7
12 SEPT 1981	5.2	11.3	22.2	0.0	0.0	0.0	0.	0.	1.2	8.1

ARTEMISIA TRIDENTATA   STUDY AREA   CEDAR MTN.

DATE			PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
01	MAY	1981	3.2	0.0	32.3	47.9	23.7	47.5	4.	12.	0.0	0.0
26	MAY	1981	3.2	9.1	30.4	49.6	38.3	0.0	0.	0.	0.0	0.0
04	JUNE	1981	3.3	9.1	32.4	0.0	0.0	0.0	4.	21.	0.0	0.0
15	JUNE	1981	3.4	9.3	36.3	0.0	0.0	0.0	4.	15.	0.0	0.0
27	JUNE	1981	3.7	9.5	36.1	0.0	0.0	0.0	0.	0.	0.0	7.3
13	JULY	1981	4.2	9.7	34.9	0.0	0.0	0.0	0.	0.	0.0	7.0
27	JULY	1981	4.3	9.7	36.1	0.0	0.0	0.0	0.	0.	2.1	8.6
10	AUGUST	1981	4.6	9.7	35.4	0.0	0.0	0.0	0.	0.	0.0	7.2
25	AUGUST	1981	4.9	9.8	34.5	0.0	0.0	0.0	0.	0.	1.2	7.8
13	SEPT	1981	5.5	10.8	38.3	0.0	0.0	0.0	0.	0.	1.8	7.4

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ARTEMESIA TRIDENTATA   STUDY AREA  CUMBER. 3
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          DATE      PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT   PLANT  DEAD     NEW    NEW
                    STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM     AGE   BRANCH   VEG.   SEED
                     VEG.  REPR.                               CLASS  PERCENT TWIG   STALK
                                                                               LNGTH  LNGTH
*****************************************************************************************
 02  MAY      1981  3.3   0.0    53.3   55.5   27.2   58.2   4.     27.     0.0    0.0

 26  MAY      1981  3.2   9.0    56.7   48.0   36.2    0.0   0.      0.     0.0    0.0

 05  JUNE     1981  3.4   9.1    52.5   49.4   37.1    0.0   4.     34.     0.0    2.0

 16  JUNE     1981  3.4   9.2    52.5    0.0    0.0    0.0   0.      0.     0.0    2.5

 30  JUNE     1981  3.8   9.5    54.8    0.0    0.0    0.0   0.      0.     0.0    4.2

 14  JULY     1981  4.3   9.5    51.7    0.0    0.0    0.0   0.      0.     0.0    5.0

 28  JULY     1981  4.3   9.5    53.5    0.0    0.0    0.0   0.      0.     1.7    4.9

 11  AUGUST   1981  4.4   9.5    55.9    0.0    0.0    0.0   4.     30.      .4    0.0

 25  AUGUST   1981  4.9   9.9    53.9    0.0    0.0    0.0   0.      0.     3.6    4.8

 12  SEPT     1981  4.9  10.6    54.8    0.0    0.0    0.0   0.      0.     1.7    4.9
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ARTEMESIA TRIDENTATA   STUDY AREA  DEMER
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        DATE      PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT   PLANT  DEAD     NEW    NEW
                  STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM    AGE    BRANCH   VEG.   SEED
                   VEG.  REPR.                               CLASS  PERCENT  TWIG   STALK
                                                                             LNGTH  LNGTH
***********************************************************************************************

 2  MAY      1981  3.1   0.0     0.0    0.0    0.0    0.0   0.        0.     0.0    0.0

20  MAY      1981  3.2   9.0    26.6   43.8   27.5    0.0   0.       63.     0.0    0.0

02  JUNE     1981  3.3   9.1    29.5    0.0    0.0    0.0   0.        0.     0.0    0.0

17  JUNE     1981  3.8   9.5    30.6    0.0    0.0    0.0   4.       18.     0.0    6.0

29  JUNE     1981  4.3   9.5    30.6    0.0    0.0    0.0   0.        0.     0.0    8.0

14  JULY     1981  4.4   9.5    32.3    0.0    0.0    0.0   4.       21.     1.1    8.7

28  JULY     1981  4.4   9.5    32.9    0.0    0.0    0.0   4.       22.      .5    0.0

11  AUGUST   1981  4.4   9.5    30.9    0.0    0.0    0.0   0.        0.     1.1    8.1

25  AUGUST   1981  4.5   9.5    32.4    0.0    0.0    0.0   0.        0.     0.0    7.9

12  SEPT     1981  5.1  10.6    32.1    0.0    0.0    0.0   0.        0.     1.1    7.3
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ARTEMISIA TRIDENTATA STUDY AREA FARSON

DATE			PHENOLOGICAL STAGE VEG.	SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
02	MAY	1981	3.3	0.0	24.1	47.5	21.5	33.7	4.	30.	0.0	0.0
26	MAY	1981	3.2	9.2	22.6	36.0	22.9	0.0	0.	0.	0.0	0.0
05	JUNE	1981	3.3	9.2	22.9	0.0	0.0	0.0	4.	26.	0.0	0.0
16	JUNE	1981	3.4	9.2	23.2	0.0	0.0	0.0	0.	0.	0.0	2.0
30	JUNE	1981	3.5	9.2	25.7	0.0	0.0	0.0	4.	27.	0.0	3.8
14	JULY	1981	4.2	9.2	22.4	0.0	0.0	0.0	0.	0.	0.0	6.1
28	JULY	1981	4.2	9.3	22.5	0.0	0.0	0.0	0.	0.	1.3	5.9
11	AUGUST	1981	4.4	9.4	25.2	0.0	0.0	0.0	4.	24.	.4	0.0
24	AUGUST	1981	4.7	9.9	24.3	0.0	0.0	0.0	0.	0.	1.1	5.2
12	SEPT	1981	5.0	11.2	24.8	0.0	0.0	0.0	0.	0.	.9	5.3

ARTEMESIA TRIDENTATA STUDY AREA HORSECREEK

DATE	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
2 MAY 1981	3.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
19 MAY 1981	3.3	9.2	29.2	48.0	26.3	0.0	0.	0.	0.0	0.0
03 JUNE 1981	3.5	9.5	31.3	46.5	30.7	0.0	0.	0.	0.0	0.0
16 JUNE 1981	4.2	9.5	34.5	0.0	0.0	0.0	4.	0.	0.0	11.1
29 JUNE 1981	4.4	9.6	37.6	0.0	0.0	0.0	0.	0.	0.0	12.8
14 JULY 1981	4.4	9.6	33.7	0.0	0.0	0.0	5.	38.	3.0	0.0
28 JULY 1981	4.5	9.6	36.2	0.0	0.0	0.0	0.	0.	0.0	13.6
11 AUGUST 1981	4.5	9.6	38.5	0.0	0.0	0.0	0.	0.	1.9	13.5
25 AUGUST 1981	4.5	9.6	37.2	0.0	0.0	0.0	4.	47.	0.0	13.3
12 SEPT 1981	5.3	11.0	31.6	0.0	0.0	0.0	0.	0.	1.2	17.1

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ARTEMISIA TRIDENTATA   STUDY AREA  MESA ANT.
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          DATE        PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT    PLANT   DEAD    NEW    NEW
                      STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM      AGE   BRANCH   VEG.   SEED
                       VEG.  REPR.                                   CLASS  PERCENT  TWIG   STALK
                                                                                     LNGTH  LNGTH
**************************************************************************************************
02  MAY       1981   3.3    0.0      23.7    43.9    21.3    38.3     4.      14.     0.0    0.0

26  MAY       1981   3.2    9.0      20.6    34.5    25.2     0.0     0.      51.     0.0    0.0

 5  JUNE      1981   3.3    9.2      22.8     0.0     0.0     0.0     4.      26.     0.0    1.9

16  JUNE      1981   3.4    9.3      24.4     0.0     0.0     0.0     0.       0.     0.0    3.3

30  JUNE      1981   3.4    9.3      24.9     0.0     0.0     0.0     3.      20.     0.0    4.9

14  JULY      1981   4.3    9.6      22.4     0.0     0.0     0.0     0.       0.     0.0    4.2

28  JULY      1981   4.3    9.6      22.9     0.0     0.0     0.0     0.       0.     1.3    5.8

11  AUGUST    1981   4.7    9.7      24.2     0.0     0.0     0.0     0.       0.     2.2    4.7

24  AUGUST    1981   4.8    9.8      23.3     0.0     0.0     0.0     0.       0.     1.4    4.8

12  SEPT      1981   5.0   11.3      22.5     0.0     0.0     0.0     0.       0.     1.4    5.6
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ARTEMISIA TRIDENTATA STUDY AREA OWL DRAW

DATE			PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	MAY	1981	3.2	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
25	MAY	1981	3.3	9.1	29.0	0.0	0.0	0.0	**	0.	0.0	0.0
8	JUNE	1981	3.4	9.2	31.1	0.0	0.0	0.0	4.	14.	0.0	0.0
15	JUNE	1981	3.4	9.3	30.8	0.0	0.0	0.0	0.	0.	0.0	5.4
26	JUNE	1981	4.2	9.5	30.3	0.0	0.0	0.0	0.	0.	0.0	8.2
13	JULY	1981	4.2	9.5	0.0	0.0	0.0	0.0	3.	21.	0.0	10.5
27	JULY	1981	4.3	9.5	32.4	0.0	0.0	0.0	3.	20.	.8	0.0
10	AUGUST	1981	4.3	9.5	30.7	0.0	0.0	0.0	0.	0.	1.0	7.6
24	AUGUST	1981	4.4	9.5	31.9	0.0	0.0	0.0	3.	29.	0.0	5.1
11	SEPT	1981	4.8	12.7	30.2	0.0	0.0	0.0	0.	0.	2.4	10.3

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ARTEMESIA TREDENTATA   STUDY AREA  RED WASH
--------------------               ----------


           DATE        PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT   PLANT  DEAD    NEW   NEW
                       STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM    AGE   BRANCH   VEG.  SEED
                        VEG.  REPR.                                CLASS PERCENT  TWIG  STALK
                                                                                  LNGTH LNGTH
************************************************************************************************

01  MAY       1981  3.2    0.0    30.9   70.3   45.1   52.8    4.     14.      0.0   2.4

04  JUNE      1981  3.4    9.0    29.3   66.6   52.7    0.0    4.     35.      0.0   2.7

15  JUNE      1981  3.5    9.2    31.8    0.0    0.0    0.0    0.      0.      0.0   3.6

29  JUNE      1981  3.6    9.3    28.9    0.0    0.0    0.0    0.      0.      0.0   4.9

13  JULY      1981  4.3    9.6    31.1    0.0    0.0    0.0    0.      0.      0.0   7.3

27  JULY      1981  4.3    9.6    19.9    0.0    0.0    0.0    4.     23.       .8   0.0

10  AUGUST    1981  4.5    9.6    37.2    0.0    0.0    0.0    4.     17.       .5   0.0

25  AUGUST    1981  4.8    9.9    31.3    0.0    0.0    0.0    0.      0.      1.9   8.0

13  SEPT      1981  5.5   11.2    32.9    0.0    0.0    0.0    0.      0.      1.2   6.7
```

ARTEMISIA TRIDENTATA STUDY AREA SHOSHONI 7

DATE			PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	MAY	1981	3.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
20	MAY	1981	3.2	9.1	17.0	35.5	21.6	0.0	0.	80.	0.0	0.0
03	JUNE	1981	3.2	9.1	19.1	0.0	0.0	0.0	0.	0.	0.0	0.0
18	JUNE	1981	3.8	9.4	20.5	0.0	0.0	0.0	0.	0.	0.0	5.6
30	JUNE	1981	4.1	9.5	18.9	0.0	0.0	0.0	0.	0.	0.0	6.4
13	JULY	1981	4.3	9.5	19.8	0.0	0.0	0.0	4.	26.	.5	6.0
27	JULY	1981	4.3	9.6	19.9	0.0	0.0	0.0	4.	24.	.8	0.0
10	AUGUST	1981	4.3	9.6	20.6	0.0	0.0	0.0	0.	0.	1.0	6.5
24	AUGUST	1981	4.5	9.7	19.9	0.0	0.0	0.0	0.	0.	0.0	7.0
11	SEPT	1981	4.9	11.6	19.8	0.0	0.0	0.0	0.	0.	1.4	6.8

ARTEMISIA TRIDENTATA STUDY AREA SWEETWATER

DATE			PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
25	MAY	1981	3.2	9.1	25.6	49.2	34.6	0.0	0.	5.	0.0	0.0
9	JUNE	1981	3.3	9.2	26.3	0.0	0.0	0.0	3.	12.	0.0	1.9
17	JUNE	1981	3.4	9.4	26.3	0.0	0.0	0.0	0.	0.	0.0	4.1
01	JULY	1981	3.6	9.5	26.4	0.0	0.0	0.0	0.	0.	0.0	.5
15	JULY	1981	4.3	9.5	22.1	0.0	0.0	0.0	0.	0.	0.0	5.5
29	JULY	1981	4.3	9.5	25.1	0.0	0.0	0.0	0.	0.	1.7	5.2
12	AUGUST	1981	4.5	9.6	27.3	0.0	0.0	0.0	4.	21.	1.5	0.0
24	AUGUST	1981	4.6	9.7	25.7	0.0	0.0	0.0	0.	0.	1.3	5.4
12	SEPT	1981	4.9	11.3	25.8	0.0	0.0	0.0	0.	0.	1.7	5.5

ARTEMESIA TRIDENTATA STUDY AREA UPPER GOVT

DATE			PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	MAY	1981	3.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
25	MAY	1981	3.2	9.0	30.3	49.1	35.7	0.0	4.	50.	0.0	0.0
09	JUNE	1981	3.4	9.3	28.5	0.0	0.0	0.0	4.	16.	0.0	4.2
17	JUNE	1981	3.4	9.3	28.3	0.0	0.0	0.0	0.	0.	0.0	4.2
30	JUNE	1981	4.2	9.5	29.9	0.0	0.0	0.0	0.	0.	0.0	6.0
13	JULY	1981	4.2	9.5	29.1	0.0	0.0	0.0	4.	14.	.8	0.0
31	JULY	1981	4.4	9.5	32.3	0.0	0.0	0.0	4.	21.	.5	6.5
10	AUGUST	1981	4.4	9.5	30.8	0.0	0.0	0.0	0.	0.	.8	5.7
24	AUGUST	1981	4.6	9.5	31.0	0.0	0.0	0.0	0.	0.	0.0	6.3
11	SEPT	1981	4.8	9.9	29.9	0.0	0.0	0.0	0.	0.	.6	6.1

TABLE VI. Phenological development dates for all species for three major growth stages - growth initiation, full bloom, seed dissemination - by exclosure for the years 1973 through 1980.

	Page
Bud Kimball Exclosure	423
Cedar Mountain Exclosure	429
Cumberland # 3 Exclosure	432
Demer Exclosure	438
Farson Exclosure	441
Horse Creek Exclosure	444
Mesa Antelope Exclosure	450
Owl Draw Exclosure	453
Red Wash # 2 Exclosure	459
Shoshoni # 7 Exclosure	462
Sweetwater Exclosure	465
Upper Government Draw Exclosure	471

TABLE VI. (Continued):

STUDY AREA BUD KIMBALL

	Growth Initiation								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGCR	----	----	----	----	----	----	----	----	Apr
AGGL	----	----	----	----	----	----	----	----	Apr
AGSM	----	Mar	Mar	Mar	23 Apr	Apr	Apr	10 Apr	Apr
AGSP	----	----	----	----	----	Apr	Apr	Apr	10 Apr
ALTE	----	----	----	----	----	May	Apr	Apr	Apr
ANDI	----	----	----	----	----	----	----	----	Apr
ANOC	----	----	----	----	----	----	----	May	----
ARHO^2	----	----	----	----	----	Apr	Apr	----	Apr
ARTR	----	20 May	May	May	23 Apr	Apr	Apr	8 Apr	12 Apr
ASPU	----	----	----	----	----	----	Apr	----	Apr
BOGR	----	----	----	----	----	Jun	Apr	1 Apr	15 Apr
BRJA	----	----	----	----	----	----	Apr	----	----
BRTE	----	----	----	Mar	23 Apr	----	Apr	Mar	Apr
CACH	----	----	----	----	23 Apr	----	----	Apr	Apr
CANU	----	----	----	----	----	----	Apr	Apr	Apr
CAAN	----	25 Apr	----	Apr	----	----	Apr	----	----
CHDE	----	----	----	----	----	----	Apr	----	----
CRMO	----	----	----	----	23 Apr	Apr	Apr	Apr	Apr
DEPI	----	----	----	----	----	May	Apr	Apr	Apr
ERPU	----	----	----	Apr	Apr	25 May	Apr	Apr	Apr
GIPU	----	----	----	----	----	----	----	May	----
HAGL	----	----	----	----	----	----	----	May	----
KOCR	----	Mar	Mar	Mar	Apr	----	Apr	Mar	----
LARE	----	----	----	Mar	Apr	25 May	Apr	Apr	2 May
LEDE	----	----	----	----	----	25 May	May	Apr	----
LERE	----	25 Apr	----	Apr	17 May	25 May	Apr	Apr	Apr
LEAL	----	----	----	----	----	----	----	----	----
LOOR	----	----	----	----	23 Apr	Apr	----	Apr	Mar
MACA	----	----	----	----	----	----	----	----	Apr
MAGL	----	----	----	----	----	----	----	10 Apr	----
MAGR	----	5 May	----	May	----	----	----	----	----
MATA	----	----	----	----	May	23 Apr	----	Apr	----
OPPO	----	----	----	Apr	23 Apr	25 May	Apr	30 Apr	25 Apr
ORHY	----	----	----	----	----	----	----	----	----
PHHO	----	----	----	Mar	23 Apr	25 May	Apr	Apr	Mar
PLPA	----	----	----	----	May	Jun	----	Apr	Apr
POSE	----	Mar	Mar	Mar	Mar	Apr	Apr	Mar	Mar
SIHY	----	Mar	Mar	Apr	----	----	Apr	----	Apr
SILI	----	----	----	----	----	----	----	----	----
SPCO	----	Mar	----	Apr	23 Apr	25 May	Apr	Apr	----
SPCR	----	----	----	----	----	----	----	----	----
STCO	----	Mar	Mar	Mar	Mar	----	Apr	Apr	Apr
STVI	----	----	----	Mar	----	----	----	Apr	Apr

TABLE VI. (Continued):

STUDY AREA BUD KIMBALL

	Growth Initiation								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
TAOF	----	----	----	----	----	----	----	Apr	Apr
TRDU	----	----	----	----	----	Apr	Apr	Apr	Apr
VIAM	----	----	----	----	----	Apr	Apr	----	Apr
VINU	----	----	----	----	23 Apr	Apr	Apr	Apr	Apr
VUOC	----	----	----	----	May	----	----	----	----

TABLE VI. (Continued):

	STUDY AREA BUD KIMBALL								
	Full Bloom								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGCR	----	----	----	----	----	----	17 Jul	13 Jun	----
AGCL	----	----	----	----	----	----	----	11 Jun	18 May
AGSM	----	25 Jun	30 Jun	20 Jul	1 Jul	19 Jul	17 Jul	----	23 Jun
AGSP	----	----	----	----	Jun	----	11 Jun	----	20 Jun
ALTE	----	----	20 Jun	----	----	----	24 May	19 May	25 May
ANDI	----	----	----	----	----	----	----	----	----
ANOC	----	----	----	----	----	----	----	20 Jun	----
ARHO[2]	----	----	----	----	----	----	24 May	11 May	----
ARTR	25 Sep	20 Sep	Sep	25 Sep	17 Sep	----	22 Sep	29 Jul	15 Sep
ASPU	----	----	----	----	----	----	11 Jun	11 May	----
BOGR	----	----	----	----	----	19 Jul	----	----	----
BRJA	----	----	----	----	----	Jun	27 Jun	19 Jun	29 Jun
BRTE	----	15 Jun	25 Jun	23 Jun	8 Jun	----	11 Jun	----	2 Jun
CACH	----	----	----	----	8 Jun	----	----	26 May	5 Jun
CANU	----	----	----	----	----	----	11 Jun	15 Jun	17 Jun
CAAN	----	5 Jul	20 Jun	15 Jun	----	Jun	24 May	----	----
CHDE	----	----	----	----	----	----	----	6 Jul	----
CRMO	----	20 Jun	15 Jun	5 Jul	May	Jun	24 May	7 Jun	4 Jun
DEPI	----	----	20 Jun	15 Jun	----	----	24 May	May	2 Jun
ERPU	----	----	25 Jun	15 Jun	Jun	26 Jun	11 Jun	2 Jun	17 Jun
GIPU	----	----	----	----	----	----	----	10 Jun	----
HAGL	----	----	----	----	----	----	22 Sep	----	----
KOCR	----	20 Jun	----	20 Jun	8 Jun	----	11 Jun	----	20 Jun
LARE	----	10 Jun	17 Jun	15 Jun	8 Jun	----	24 May	May	5 Jun
LEDE	----	----	----	----	----	----	----	30 May	----
LERE	----	25 Jun	25 Jun	27 Jun	----	----	11 Jun	May	25 Jun
LEAL	----	----	----	----	----	----	----	----	----
LOOR	----	----	----	----	17 May	----	----	30 Apr	2 May
MACA	----	----	----	----	----	----	----	6 Jun	1 Jul
MAGL	----	----	----	----	----	----	----	30 May	----
MAGR	----	15 June	----	15 Jun	----	----	----	----	----
MATA	----	----	23 Jun	20 Jul	1 Jul	----	----	----	----
OPPO	----	15 Jun	----	20 Jun	----	19 Jul	27 Jun	22 Jun	29 Jun
ORHY	----	----	----	----	----	----	----	----	----
PHHO	----	----	10 Jun	15 Jun	----	----	24 May	30 Apr	2 May
PLPA	----	----	----	----	----	Jun	11 Jun	7 Jun	5 Jun
POSE	----	5 Jun	25 Jun	1 Jul	8 Jun	26 Jun	11 Jun	----	10 Jun
SIHY	----	15 Jul	10 Jul	15 Jul	Jun	----	11 Jun	19 Jun	17 Jun
SILI	----	----	----	----	----	----	----	----	----
SPCO	----	25 Jun	30 Jun	10 Jul	----	----	----	----	17 Jun
SPCR	----	----	30 Jun	----	----	----	----	----	----
STCO	----	25 Jun	5 Jul	10 Jul	Jun	----	11 Jun	----	29 Jun

TABLE VI. (Continued):

STUDY AREA BUD KIMBALL

	Full Bloom								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
STVI	----	----	----	3 Jul	----	----	----	23 Jun	29 Jun
TAOF	----	----	----	----	----	----	----	16 May	24 Apr
TRDU	----	----	----	----	----	----	11 Jun	26 Jun	19 Jun
VIAM	----	----	----	----	----	Jun	11 Jun	23 May	15 Jun
VINU	----	----	15 Jun	----	17 May	----	----	7 May	19 May
VUOC	----	----	----	----	Jun	----	11 Jun	----	10 Jun

TABLE VI. (Continued):

STUDY AREA BUD KIMBALL

Species	Seed Dissemination								
	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGCR	----	----	----	----	----	----	7 Aug	6 Sep	----
AGGL	----	----	----	----	----	----	----	30 Jun	29 Jun
AGSM	10 Aug	10 Aug	15 Aug	19 Aug	11 Aug	2 Sep	1 Sep	22 Aug	11 Aug
AGSP	----	----	----	----	20 Jul	10 Aug	9 Aug	----	29 Jun
ALTE	12 Jul	17 Jul	20 Jul	----	----	19 Jul	17 Jul	10 Jul	2 Jul
ANDI	----	----	----	----	----	----	17 Jul	11 Jul	29 Jun
ANOC	----	----	----	----	----	----	----	11 Jul	----
ARHO^2	----	----	----	----	----	19 Jul	17 Jul	11 Jul	10 Jul
ARTR	----	Nov	Nov	Nov	----	1 Nov	----	----	----
ASPU	----	----	----	----	----	----	27 Jun	30 Jun	17 Jun
BOGR	----	----	----	----	----	2 Sep	----	----	----
BRJA	----	----	----	----	----	19 Jul	17 Jul	29 Jul	14 Jul
BRTE	----	----	20 Jul	30 Jul	1 Jul	19 Jul	27 Jun	24 Jul	10 Jul
CACH	----	----	----	----	1 Jul	----	----	13 Jul	14 Jul
CANU	----	----	----	----	----	10 Aug	1 Aug	26 Jul	3 Aug
CAAN	20 Jul	25 Jul	25 Jul	15 Jul	----	19 Jul	17 Jul	----	----
CHDE	----	----	----	----	----	2 Sep	Aug	14 Jul	----
CRMO	----	----	----	15 Jul	1 Jul	19 Jul	1 Jul	11 Jul	29 Jun
DEPI	----	----	25 Jul	25 Jun	----	19 Jul	27 Jun	4 Jul	29 Jun
ERPU	----	----	25 Jul	30 Jun	1 Jul	19 Jul	17 Jul	11 Jul	14 Jul
GIPU	----	----	----	----	----	----	9 Aug	2 Jul	----
HAGL	----	----	----	----	----	----	----	----	----
KOCR	20 Jul	10 Jul	----	25 Jul	20 Jun	----	17 Jul	----	28 Jul
LARE	20 Jul	25 Jul	25 Jul	25 Jul	20 Jul	19 Jul	27 Jun	14 Jul	4 Jul
LEDE	----	----	----	----	1 Jul	19 Jul	17 Jul	17 Jul	14 Jul
LERE	10 Jul	15 Jul	15 Jul	10 Jul	1 Jul	19 Jul	----	18 Jul	10 Jul
LEAL	----	----	----	----	----	----	17 Jul	----	----
LOOR	----	----	----	15 Jul	1 Jul	26 Jun	27 Jun	21 Jun	2 Jun
MACA	----	----	----	----	----	----	----	24 Jul	28 Jul
MAGL	----	----	----	----	----	----	----	20 Jul	----
MAGR	----	15 Jul	----	20 Jul	----	----	----	----	----
MATA	----	----	----	----	20 Jul	----	----	----	----
OPPO	Sep	30 Aug	15 Aug	5 Aug	11 Aug	----	9 Aug	11 Sep	25 Aug
ORHY	----	----	----	----	----	----	27 Jun	----	----
PHHO	----	----	----	17 Aug	1 Jul	----	17 Jul	6 Jul	29 Jun
PLPA	25 Jul	20 Jul	25 Jul	----	1 Jul	19 Jul	17 Jul	7 Aug	27 Jun
POSE	15 Jul	1 Jul	5 Jul	20 Jul	1 Jul	19 Jul	27 Jun	----	23 Jun
SIHY	20 Jul	30 Jul	30 Jul	30 Jul	1 Jul	10 Aug	17 Jul	24 Jul	28 Jul
SILI	----	----	----	----	----	10 Aug	27 Jun	----	----
SPCO	----	20 Jul	25 Jul	10 Aug	----	----	----	----	11 Aug
SPCR	----	----	27 Jul	----	----	----	----	----	----
STCO	25 Jul	30 Jul	30 Jul	5 Aug	1 Jun	19 Jul	17 Jul	----	14 Jul

TABLE VI. (Continued):

STUDY AREA BUD KIMBALL									
	Seed Dissemination								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
STVI	----	----	----	20 Jul	20 Jul	----	----	29 Jul	14 Jul
TAOF	----	----	----	----	----	----	1 Jun	9 Jul	19 May
TRDU	----	----	----	----	----	10 Aug	17 Jul	1 Aug	18 Jul
VIAM	----	----	----	----	----	19 Jul	Jul	18 Jul	12 Jul
VINU	----	----	----	----	1 Jul	----	11 Jun	15 Jun	2 Jun
VUOC	----	----	----	----	1 Jul	19 Jul	17 Jul	----	12 Jul

TABLE VI. (Continued):

STUDY AREA CEDAR MOUNTAIN

	Growth Initiation								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGCR	----	5 Mar	Apr	Apr	20 Apr	Apr	Apr	13 Apr	Apr
AGSP	----	----	Apr	Apr	20 Apr	29 Apr	Apr	Apr	Apr
ARHO	----	----	----	----	20 Apr	----	----	----	----
ARHO^2	----	Apr	----	Apr	----	----	Apr	12 Apr	Apr
ARSP	----	Apr	----	Apr	20 Apr	29 Apr	Apr	Apr	Apr
ARTR	----	24 May	15 May	May	19 May	29 Apr	Apr	Apr	Apr
ASPU	----	Apr	Apr	Mar	----	May	Apr	Apr	Apr
ATCO	----	May	May	May	19 May	Apr	Apr	16 Apr	Apr
ATGA	----	Apr	Apr	Apr	19 May	22 May	Apr	17 Apr	Apr
CELA	----	24 May	15 May	May	19 May	----	----	Apr	Apr
CHDE	----	----	----	----	----	----	----	----	----
CHVI	May	May	10 May	May	19 May	22 May	Apr	13 Apr	27 Apr
CORA	----	----	----	----	----	----	----	----	----
CRMO	----	----	----	----	----	----	----	Apr	----
CYMO	----	----	----	----	20 Apr	22 May	----	Apr	Apr
EROV	----	----	May	----	20 Apr	May	----	Apr	Apr
ERPU	----	----	10 May	Apr	20 Apr	----	----	----	----
HAAC	----	Apr	----	Apr	20 Apr	Jun	----	Apr	Apr
KOAM	----	11 Mar	Mar	Mar	Apr	Apr	----	25 Apr	Apr
LARE	----	----	----	----	----	----	----	----	----
OPPO	----	Apr	5 May	May	19 May	22 May	25 May	11 May	27 May
ORHY	----	5 Mar	----	Apr	Apr	Apr	----	Apr	----
PEFR	----	----	----	----	20 Apr	Apr	----	----	Apr
PHHO	----	Apr	----	Apr	20 Apr	Apr	----	----	Apr
PHLO	----	----	----	----	7 Jun	Apr	----	----	Apr
POSE	----	15 Mar	----	Mar	20 Apr	29 Apr	Apr	Apr	Apr
SAVE	----	----	----	----	----	Jun	----	----	----
SIAL	----	----	----	----	----	Apr	----	----	----
SIHY	----	10 Mar	----	----	20 Apr	Apr	----	12 Apr	Apr
SILI	----	----	----	----	May	Apr	----	----	Apr
SPCO	----	----	----	----	May	22 May	Apr	Apr	Apr
TAOF	----	----	----	----	----	----	----	----	Apr
TENU	----	Apr	10 May	Apr	19 May	22 May	----	Apr	27 Apr
TOIN	----	----	----	----	20 Apr	----	----	----	Apr

TABLE VI. (Continued):

STUDY AREA CEDAR MOUNTAIN									
	Full Bloom								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGCR	Jun	17 Jun	Jun	20 Jun	Jun	----	24 Jun	5 Jul	18 Jul
AGSP	5 Jul	30 Jun	20 Jun	1 Jul	----	----	24 Jun	24 Jun	4 Jul
ARHO	----	----	----	----	----	----	----	----	----
ARHO^2	Jun	5 Jun	----	3 Jun	----	----	----	19 May	15 May
ARSP	Jul	Jul	25 Jun	5 Jul	Jun	----	25 May	1 Jul	15 Jun
ARTR	Sep	Sep	Sep	Sep	----	----	31 Aug	Sep	25 Sep
ASPU	----	30 May	25 May	May	----	----	4 Jun	3 Jun	4 Jun
ATCO	Jul	25 Jun	Jul	----	----	----	24 Jun	18 Jun	20 Jun
ATGA	Jun	5 Jun	5 Jun	1 Jun	----	Jun	4 Jun	21 Jun	4 Jun
CELA	----	Jul	15 Jul	----	----	----	15 Jul	21 Jun	13 Aug
CHDE	----	----	----	----	----	----	----	23 Jun	----
CHVI	----	Aug	Aug	18 Aug	18 Aug	30 Aug	6 Aug	24 Aug	20 Aug
CORA	----	----	----	----	----	26 Jun	6 Aug	15 Jul	----
CRMO	----	----	----	----	----	----	----	17 Jun	----
CYMO	----	----	----	----	May	----	----	17 May	----
EROV	----	Jun	10 Jun	Jun	----	Jun	----	Jun	----
ERPU	Jun	15 Jun	----	20 Jun	----	----	----	16 Jul	----
HAAC	10 Jun	1 Jun	5 Jun	7 Jun	----	----	4 Jun	17 Jun	4 Jun
KOAM	----	Jul	10 Jul	----	----	----	24 Jun	14 Jul	18 Aug
LARE	----	----	----	----	----	----	4 Jun	5 Jun	----
OPPO	10 Jul	Jul	10 Jul	15 Jun	----	----	15 Jul	10 Jul	27 Jul
ORHY	20 Jun	20 Jun	----	20 Jun	----	----	----	21 Jun	----
PEFR	----	----	----	----	----	----	----	7 Jul	15 Jun
PHHO	----	30 May	30 May	5 Jun	----	----	4 Jun	29 May	24 May
PHLO	----	30 May	15 Jun	10 Jun	----	----	25 May	2 Jun	4 Jun
POSE	Jun	15 Jun	15 Jun	15 Jun	----	Jun	4 Jun	17 Jun	15 Jun
SAVE	----	----	----	----	----	----	----	----	----
SIAL	----	----	----	----	----	----	----	Jun	----
SIHY	28 Jun	15 Jun	20 Jun	15 Jun	----	----	24 Jun	29 Jun	22 Jun
SILI	----	25 May	----	1 Jul	----	Jun	25 May	1 Jun	15 Jun
SPCO	----	15 Jun	Jul	12 Jun	----	----	4 Jun	30 Jun	19 Jun
TAOF	----	----	----	----	----	----	----	----	----
TENU	Jul	Jul	Jul	----	----	----	24 Jun	7 Jul	----
TOIN	----	----	----	----	----	----	4 Jun	19 Jun	8 Jun

TABLE VI. (Continued):

STUDY AREA CEDAR MOUNTAIN

Seed Dissemination

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGCR	----	----	Aug	10 AUG	19 Jul	30 Aug	6 Aug	20 Sep	10 Aug
AGSP	----	----	5 Aug	20 Aug	----	30 Aug	6 Aug	17 Aug	5 Aug
ARHO	----	----	----	----	----	----	----	----	----
ARHO^2	----	----	----	5 Aug	----	8 Aug	24 Jun	24 Jul	27 Jun
ARSP	----	----	Jul	1 Aug	27 Jun	8 Aug	15 Jul	25 Aug	20 Jun
ARTR	----	----	----	Nov	5 Nov	----	----	----	----
ASPU	30 Jun	17 Jun	25 Jun	1 Jul	27 Jun	----	24 Jun	3 Aug	13 Jul
ATCO	----	----	-----	1 Jul	----	----	6 Aug	Sep	25 Aug
ATGA	----	----	----	1 Aug	----	----	----	20 Sep	25 Aug
ATNU	----	----	----	----	----	----	15 Jul	----	----
CELA	----	----	----	----	----	----	6 Aug	Sep	13 Sep
CHDE	----	----	----	----	----	----	----	Sep	----
CHVI	----	----	----	Sep	5 Nov	----	----	----	13 Sep
CORA	----	----	----	----	----	30 Aug	----	8 Sep	----
CRMO	----	----	----	----	----	----	----	11 Jul	----
CYMO	----	----	----	----	19 Jul	----	----	----	----
EROV	----	Aug	1 Aug	5 Aug	19 Jul	----	----	20 Sep	----
ERPU	Jul	Jul	Aug	20 Jul	----	----	----	----	Jun
HAAC	----	21 Jun	20 Jul	1 Jul	----	----	24 Jun	13 Jul	27 Jun
KOAM	----	----	Aug	----	----	----	6 Aug	20 Sep	1 Sep
LARE	----	----	----	----	----	----	----	14 Jul	----
OPPO	----	----	----	10 Aug	9 Sept	----	6 Aug	----	10 Sep
ORHY	Aug	----	25 Jul	1 Aug	----	17 Jul	----	28 Jul	----
PEFR	----	----	----	----	----	----	----	Aug	10 Aug
PHHO	28 Jun	20 Jun	Jul	30 Jun	----	----	24 Jun	11 Jul	27 Jun
PHLO	----	15 Jun	15 Jul	20 Jul	----	----	24 Jun	24 Jul	13 Jul
POSE	Jul	5 Jul	Jul	10 Jul	27 Jun	17 Jul	15 Jul	15 Aug	10 Jul
SAVE	----	----	----	----	----	----	----	----	----
SIAL	----	----	----	----	----	17 Jul	----	26 Jul	----
SIHY	1 Aug	Jul	Aug	10 Aug	----	17 Jul	15 Jul	11 Aug	13 Jul
SILI	28 Jun	----	----	----	----	8 Aug	1 Jul	25 Jul	5 Aug
SPCO	----	----	Aug	20 Jul	----	----	15 Jul	4 Aug	25 Aug
TAOF	----	----	----	----	----	----	Jun	----	15 Jun
TENU	----	----	Aug	20 Aug	----	30 Aug	15 Jul	Sep	----
TOIN	----	----	----	----	----	----	15 Jul	----	27 Jun

TABLE VI. (Continued)

STUDY AREA CUMBERLAND 3									
	Growth Intiation								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
ACMI	----	----	----	----	----	----	----	----	Apr
AGGL	----	10 Mar	----	May	19 May	May	May	Apr	Apr
AGSM	----	Apr	Mar	Apr	Apr	Apr	Apr	Apr	Apr
AGSP	----	Apr	Mar	Apr	Apr	Apr	Apr	Apr	Apr
AMAL	----	20 May	----	May	19 May	May	May	Apr	Apr
ANDI	----	May	----	Apr	19 May	May	Apr	Apr	Apr
ANSE	----	----	----	----	----	----	----	----	----
ARHO	----	----	----	----	19 May	----	----	----	----
ARHO^2	----	May	----	May	----	Apr	----	Apr	Apr
ARTR	Jun	20 May	May	May	Sep	May	May	Apr	Apr
ASCA	----	----	----	----	----	----	----	----	----
ASCI	----	May	----	----	19 May	Jun	----	Apr	Apr
ASDI	----	Apr	----	May	----	----	----	Apr	Apr
ASMI	----	----	----	----	----	----	----	Apr	Apr
ASPU	----	----	----	----	19 May	May	----	Apr	Apr
ASMI^2	----	----	----	----	----	----	----	----	----
BRTE	----	----	----	----	----	----	----	----	----
CANU	----	----	----	----	----	----	----	Apr	----
CALI	----	12 Mar	----	May	May	Apr	----	Apr	----
CHAL	----	----	----	----	----	----	----	----	----
CHNA	----	----	----	----	Jun	----	----	----	----
CHVI	----	20 May	----	May	19 May	Apr	----	----	Apr
COPA	----	1 Jun	May	----	Apr	May	----	----	Apr
CORA	----	6 Jun	----	May	----	6 Jun	----	----	----
CRAC	----	30 May	----	May	----	----	----	Apr	Apr
CRFL	----	----	----	----	----	----	----	----	Apr
CYMO	----	----	----	----	----	----	----	----	Apr
DEPI	----	----	----	----	----	----	----	----	Apr
ERMI	----	14 May	May	May	19 May	Apr	----	----	Apr
EROV	----	12 Mar	----	----	----	----	----	----	----
ERSU	----	----	----	----	----	----	----	----	----
FRPU	----	----	----	----	----	----	----	----	----
KOCR	----	----	----	----	----	----	----	----	----
LARE	----	----	----	----	----	Apr	----	----	----
LEPE	----	----	----	----	----	May	----	----	----
LOSI	----	----	----	Apr	Apr	May	----	----	Apr
MACA	----	----	----	----	----	Jul	----	----	----
MELO	----	Apr	----	Apr	Apr	----	----	----	Apr
OPPO	----	May	May	May	19 May	May	22 May	30 May	26 May
ORHY	----	12 Mar	----	Mar	Apr	Apr	May	Apr	Apr
PELA	----	----	----	----	----	----	----	----	----
PHHO	----	Mar	----	----	----	May	----	----	Apr
PHLO	----	Mar	----	May	19 May	May	----	----	Apr
PHMU	----	----	----	----	19 May	----	----	----	----

TABLE VI. (Continued)

STUDY AREA CUMBERLAND 3									
	Growth Intiation								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
POAM	----	----	----	----	----	----	----	----	Apr
POFE	----	Mar	----	Apr	19 May	Apr	----	----	Apr
POSE	----	Mar	----	Apr	Apr	Apr	----	----	Apr
SEIN	----	----	----	----	----	May	----	Apr	Apr
SIAL	----	----	----	----	----	May	May	----	Apr
SIHY	----	----	----	----	19 May	Apr	----	----	Apr
SILI	----	----	----	----	May	Apr	----	----	Apr
STCO	----	----	----	Apr	Apr	May	May	Apr	Apr
STCO[2]	----	----	----	----	----	----	----	----	----
SYOC	----	----	----	----	19 May	May	May	----	Apr
TAOF	----	----	----	----	----	----	----	----	Apr
TECA	----	24 May	----	May	19 May	May	May	Apr	Apr
TRDU	----	----	----	----	----	Apr	----	----	----
TRGY	----	----	----	May	19 May	May	May	Apr	Apr
VINU	----	----	----	May	19 May	May	----	----	Apr
WYAM	----	----	----	----	----	May	----	----	----
ZIPA	----	12 Mar	----	Mar	Apr	Apr	----	Apr	Apr

TABLE VI. (Continued):

STUDY AREA CUMBERLAND 3									
	Full Bloom								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
ACMI	----	----	----	----	----	----	----	12 Jul	28 Jul
AGGL	15 Jun	10 Jun	----	10 Jun	----	Jun	5 Jun	11 Jun	5 Jul
AGSM	25 Jul	30 Jun	Jul	----	Apr	----	----	10 Jul	3 Jul
AGSP	28 Jun	25 Jun	Jul	20 Jul	----	----	25 Jun	6 Jul	3 Jul
AMAL	----	----	30 Jun	10 Jun	----	26 Jun	5 Jun	12 Jun	16 Jun
ANDI	----	Jun	----	1 Jun	7 Jun	----	5 Jun	24 May	30 May
ANSE	----	----	----	----	----	----	----	19 Jun	----
ARHO	----	----	----	----	----	----	----	----	----
ARHO[2]	Jun	24 May	Jun	1 Jun	----	6 Jun	----	Jun	20 May
ARTR	Sep	Sep	5 Aug	15 Sep	----	----	1 Sep	Sep	4 Oct
ASCA	----	10 Jul	----	----	----	----	----	----	----
ASCI	----	6 Jun	10 Jun	1 Jun	----	----	5 Jun	Jun	1 Jun
ASDI	5 Jul	6 Jun	Jun	3 Jul	----	----	5 Jun	23 May	----
ASMI	----	----	----	----	----	----	----	17 Jun	16 Jun
ASPU	----	----	----	----	----	6 Jun	----	Jun	----
ASMI[2]	----	10 Jun	12 Jun	----	----	----	Jul	----	----
BRTE	----	----	----	----	----	----	----	7 Jul	16 Jun
CANU	----	----	----	----	----	Jul	----	Jul	----
CALI	5 Jul	30 Jun	Jun	15 Jun	28 Jun	26 Jun	25 Jun	25 Jun	5 Jun
CHAL	----	----	----	----	----	----	----	13 Jul	----
CHNA	----	----	----	----	9 Aug	----	----	----	----
CHVI	5 Aug	15 Jul	Jul	5 Aug	9 Aug	8 Aug	15 Jul	15 Aug	14 Aug
COPA	----	14 Jun	Jun	1 Jul	28 Jun	----	22 May	22 Jun	8 Jun
CORA	----	----	----	10 Aug	0000	8 Aug	7 Aug	9 Aug	----
CRAC	5 Jul	15 Jul	20 Jun	30 Jun	----	----	25 Jun	19 Jun	5 Jun
CRFL	----	----	----	----	----	----	----	13 Jul	30 May
CYMO	----	----	----	----	----	----	----	22 Jun	26 May
DEPI	----	----	----	----	----	----	5 Jun	----	5 Jun
ERMI	10 Aug	15 Jul	5 Aug	20 Aug	9 Aug	Aug	15 Jul	----	14 Aug
EROV	25 Jun	6 Jun	----	----	----	----	----	Jun	----
ERSU	----	25 Jun	----	----	----	----	----	----	----
FRPU	----	----	----	----	----	----	----	Jun	----
KOCR	----	----	----	----	----	----	----	----	----
LARE	----	----	----	----	----	----	----	17 Jun	10 Jun
LEPE	----	----	----	----	----	----	----	----	----
LOSI	----	----	----	----	----	1 Jun	22 May	Apr	5 Jun
MACA	----	----	----	----	----	8 Aug	----	----	----
MELO	5 Jul	30 May	15 Jun	15 Jun	May	----	----	5 May	26 May
OPPO	----	15 Jul	5 Jul	10 Aug	19 Jul	----	15 Jul	11 Jul	24 Jul
ORHY	5 Jul	30 Jun	-----	10 Jun	----	-----	1 Jul	7 Jul	14 Jul
PELA	20 Jun	15 Jun	25 Jun	----	----	----	----	Jun	----
PHHO	Jun	24 May	5 Jun	5 Jun	----	----	22 May	11 Jun	26 May
PHLO	Jun	6 Jun	15 Jun	15 Jun	----	Jun	22 May	14 Jun	16 Jun
PHMU	----	----	----	----	----	----	----	5 May	----

TABLE VI. (Continued):

STUDY AREA CUMBERLAND 3

	Full Bloom								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
POAM	----	----	----	----	----	----	----	25 Jun	----
POFE	Jun	15 Jun	Jul	15 Jun	Jun	----	22 May	10 Jun	16 Jun
POSE	2 Jul	30 Jun	30 Jun	10 Jun	Jun	----	5 Jun	Jun	----
SEIN	----	----	----	----	----	Jun	5 Jun	10 Jun	5 Jun
SIAL	----	----	----	----	----	Jun	5 Jun	20 Jun	10 Jun
SIHY	5 Jul	1 Jul	----	----	----	----	25 Jun	9 Jul	30 Jun
SILI	----	----	----	----	----	Jun	5 Jun	----	16 Jun
STCO	----	Jun	Jun	Jun	----	----	25 Jun	4 Jul	30 Jun
STCO^2	----	----	----	----	----	----	----	4 Jul	----
SYOC	----	----	----	----	----	----	25 Jun	1 Jul	3 Jul
TAOF	----	----	----	----	----	----	----	Jun	26 May
TECA	10 Aug	10 Jul	5 Aug	1 Aug	Jul	8 Aug	15 Jul	2 Aug	11 Aug
TRDU	----	----	----	----	----	Jul	25 Jun	18 Jul	5 Jul
TRGY	----	30 May	----	----	----	----	----	Jun	26 May
VINU	----	----	Jun	----	----	----	----	11 Jun	26 May
WYAM	----	----	----	----	----	----	----	----	----
ZIPA	----	8 Jun	12 Jun	10 Jun	7 Jun	----	5 Jun	23 Jun	5 Jun

TABLE VI. (Continued):

STUDY AREA CUMBERLAND 3

Species	Seed Dissemination								
	1973	1974	1975	1976	1977	1978	1979	1980	1981
ACMI	----	----	----	----	----	----	----	15 Sep	25 Aug
AGGL	Aug	Jun	----	10 Jul	7 Jun	----	25 Jun	Aug	14 Jul
AGSM	20 Aug	5 Aug	Aug	----	----	8 Aug	7 Aug	19 Sep	11 Aug
AGSP	5 Aug	30 Jul	25 Jul	20 Aug	----	8 Aug	7 Aug	16 Aug	28 Jul
AMAL	----	----	----	10 Sep	9 Aug	----	15 Jul	23 Aug	14 Jul
ANDI	Jun	20 Jun	----	15 Jul	19 Jul	----	25 Jun	15 Jul	16 Jul
ANSE	----	----	----	----	----	----	----	30 Jul	----
ARHO	----	----	----	----	9 Aug	----	----	----	----
ARHO^2	5 Jul	10 Jul	Jul	1 Aug	----	17 Jul	15 Jul	10 Aug	14 Jul
ARTR	----	----	----	Nov	5 Nov	4 Nov	----	----	----
ASCA	----	----	----	----	----	----	----	----	----
ASCI	28 Jun	25 Jun	Jul	15 Jul	----	----	----	2 Aug	14 Jul
ASDI	30 Jul	15 Jul	Jul	20 Aug	----	----	25 Jun	15 Sep	----
ASMI	----	----	----	----	----	----	----	----	28 Jul
ASPU	----	----	----	----	28 Jun	17 Jul	----	12 Aug	26 May
ASMI^2	----	20 Jul	----	----	----	----	----	----	----
BRTE	----	----	----	----	----	----	15 Jul	26 Aug	28 Jul
CANU	----	----	----	----	----	----	----	27 Aug	----
CALI	25 Jul	----	Aug	20 Aug	9 Aug	8 Aug	7 Aug	Aug	28 Jul
CHAL	----	----	----	----	----	----	----	Sep	----
CHNA	----	----	----	----	7 Sep	----	----	----	----
CHVI	----	----	----	1 Oct	5 Nov	4 Nov	1 Sep	Sep	----
COPA	----	20 Jul	Jul	25 Aug	9 Aug	----	1 Jul	12 Aug	11 Aug
CORA	----	----	----	30 Aug	----	30 Aug	22 Sep	Sep	----
CRAC	14 Aug	----	Jul	14 Jul	----	----	15 Jul	1 Jul	14 Jul
CRFL	----	----	----	----	----	----	----	25 Aug	----
CYMO	----	----	----	----	----	----	----	27 Jul	----
DEPI	----	20 Jun	----	----	----	----	25 Jun	7 Aug	20 Jul
ERMI	----	----	----	30 Oct	5 Nov	4 Nov	1 Sep	----	12 Jul
EROV	14 Aug	10 Jul	----	----	----	----	----	----	----
ERSU	----	25 Jul	----	----	----	----	----	----	----
FRPU	----	----	----	----	----	----	----	3 Aug	----
KOCR	----	----	----	----	----	----	1 Sep	----	28 Jul
LARE	----	----	----	----	----	26 Jun	----	4 Aug	24 Jul
LEPE	----	----	----	----	----	8 Aug	----	----	----
LOSI	Jul	Jun	----	1 Jul	28 Jun	8 Aug	25 Jun	26 Jul	14 Jul
MACA	----	----	----	----	----	----	----	----	----
MELO	----	Jul	----	10 Aug	7 Jun	----	----	15 Jul	28 Jul
OPPO	----	----	Aug	20 Sep	9 Aug	----	7 Aug	15 Sep	12 Sep
ORHY	----	----	----	20 Aug	9 Aug	8 Aug	7 Aug	26 Aug	25 Aug
PELA	10 Aug	15 Jul	Jul	20 Aug	----	----	25 Jun	----	----
PHHO	10 Jul	20 Jul	Jul	10 Jul	----	26 Jun	25 Jun	3 Aug	4 Jul
PHLO	10 Jul	20 Jul	Jul	10 Jul	28 Jun	26 Jun	25 Jun	10 Aug	14 Jul
PHMU	----	----	----	----	28 Jun	----	----	4 Aug	----

TABLE VI. (Continued):

STUDY AREA CUMBERLAND 3

Seed Dissemination

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
POAM	----	----	----	----	----	----	----	20 Sep	----
POFE	25 Jul	10 Jul	25 Jul	1 Aug	28 Jun	8 Aug	15 Jul	28 Aug	28 Jul
POSE	15 Jul	5 Jul	Jul	15 Jul	28 Jul	17 Jul	15 Jul	21 Aug	----
SEIN	----	----	----	----	----	8 Aug	----	12 Aug	28 Jul
SIAL	----	----	----	----	----	17 Jul	15 Jul	12 Aug	20 Jul
SIHY	30 Jul	30 Jul	25 Jul	10 Aug	----	8 Aug	7 Aug	26 Aug	14 Jul
SILI	----	----	----	----	----	17 Jul	----	----	14 Jul
STCO	----	Jul	Jul	15 Jul	----	17 Jul	15 Jul	20 Aug	28 Jul
STCO[2]	----	----	----	----	----	----	----	23 Aug	----
TAOF	----	----	----	----	----	----	----	15 Jul	14 Jul
TECA	----	----	----	30 Sep	7 Sep	30 Aug	1 Sep	20 Sep	----
TRDU	----	----	----	----	----	----	15 Jul	27 Aug	28 Jul
TRGY	28 Jun	20 Jun	----	----	----	----	----	4 Aug	14 Jul
VINU	----	Jun	Jul	----	----	----	----	----	----
WYAM	----	----	----	----	----	----	----	----	----
ZIPA	Jun	15 Jun	Jun	20 Jul	28 Jun	8 Aug	25 Jun	9 Aug	4 Jul

TABLE VI. (Continued):

STUDY AREA DEMER

Growth Initiation

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	----	5 Mar	5 Mar	Mar	Mar	Apr	Apr	Mar	Apr
AGSP	----	5 Mar	1 Mar	Mar	Mar	Apr	Apr	Mar	Mar
ALTE	----	----	Apr	----	Apr	Apr	Apr	Mar	Apr
ARTR	----	20 May	22 Apr	Apr	23 Apr	25 May	28 Apr	7 Apr	15 Apr
ASMI	----	----	----	----	----	Jun	----	May	15 Apr
ASPU	----	----	----	----	----	----	28 Apr	----	13 Apr
BOGR	----	30 Mar	25 Apr	Apr	Mar	Apr	Apr	Mar	Mar
BRTE	----	----	Mar	Mar	Mar	----	Apr	Mar	Mar
CANU	----	----	----	----	----	May	----	Mar	Apr
CHFR	----	----	Apr	----	----	----	----	----	----
CIUN	----	----	Apr	May	----	----	----	----	----
CRFE	----	----	----	----	----	----	----	----	----
CYMO	----	----	Mar	----	----	----	----	Mar	Mar
DEGE	----	25 Mar	5 May	Apr	23 Apr	Apr	Apr	Mar	Apr
DEPI	----	----	----	----	Apr	Apr	----	12 Apr	Apr
ERPU	----	Mar	----	----	----	----	----	----	Apr
GIPU	----	----	----	----	----	Jun	----	----	----
HOJU	----	----	----	----	----	----	----	----	----
KOCR	----	----	----	----	----	----	----	Mar	Apr
LASC	----	----	----	----	----	----	----	Jun	May
LARE	----	----	May	May	----	Apr	28 Apr	----	Apr
LEDE	----	----	May	May	May	25 May	----	12 Apr	Apr
LUPU	----	----	20 May	----	----	----	----	Apr	Apr
MACA	----	----	----	----	----	----	----	----	Apr
MATA	----	----	----	----	----	----	----	----	----
OPPO	----	28 Mar	----	Apr	23 Apr	25 May	28 Apr	30 Apr	Apr
ORHY	----	----	5 Mar	Mar	----	May	Apr	Apr	Mar
PHHO	----	----	----	----	----	----	----	Mar	Apr
PLPA	----	----	Mar	May	Apr	25 May	----	Apr	15 Apr
POSE	----	1 Mar	1 Mar	Mar	Mar	Apr	----	Mar	Mar
SAIB	Jun	----	----	Jun	----	----	----	----	----
SIAL	----	----	----	----	----	Apr	28 Apr	6 Apr	Apr
SIHY	----	5 Mar	1 Mar	Mar	Mar	----	----	Mar	Mar
SILI	----	----	Apr	May	17 May	----	----	----	----
SPCO	----	25 Apr	30 Apr	May	23 Apr	Apr	Apr	Apr	Apr
STCO	----	5 Mar	5 Mar	Mar	Mar	----	Apr	Apr	Apr
TAOF	----	----	----	----	----	----	----	----	Apr
TRDU	----	----	----	----	----	----	----	17 Apr	Apr
VUOC	----	----	Mar	May	----	Apr	----	Apr	Apr

TABLE VI. (Continued):

	STUDY AREA DEMER								
	Full Bloom								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	20 Jun	25 Jun	5 Jul	----	----	----	----	----	20 Jun
AGSP	10 Jun	25 Jun	1 Jul	15 Jun	----	----	7 Jun	26 Jun	15 Jun
ALTE	----	----	10 Jun	----	May	May	24 May	21 May	15 May
ARTR	10 Sep	20 Sep	10 Sep	5 Sep	----	----	1 Sep	Sep	25 Sep
ASMI	----	----	----	----	----	----	7 Jun	Jun	----
ASPU	----	----	----	----	----	----	----	----	----
BOGR	5 Aug	5 Jul	15 Jul	12 Jul	----	Jun	27 Jun	May	15 Jul
BRTE	----	10 Jun	12 Jun	15 Jun	9 Jun	----	7 Jun	May	20 May
CANU	----	----	----	----	----	Jun	7 Jun	13 Jun	20 Jun
CHFR	----	----	----	----	----	----	7 Jun	22 Jun	29 Jun
CIUN	----	----	----	----	----	----	----	----	----
CRFE	----	----	----	----	----	----	----	----	----
CYMO	----	----	1 Jun	----	----	----	Jun	2 May	----
DEGE	30 Jul	10 Jun	20 Jun	15 Jun	9 Jun	----	24 May	31 May	6 Jun
DEPI	----	----	----	----	9 Jun	----	24 May	May	20 May
ERPU	----	----	----	----	----	----	7 Jun	24 May	17 Jun
GIPU	----	----	----	----	----	Jul	----	----	----
HOJU	----	----	----	----	----	----	Jun	----	----
KOCR	----	----	----	----	----	----	----	----	17 Jun
LASC	----	----	----	----	----	----	17 Jul	9 Aug	----
LARE	----	5 Jun	15 Jun	28 May	----	----	24 May	May	8 Jun
LEDE	----	----	----	Jun	----	Jun	Jun	4 Jun	13 May
LUPU	----	----	25 Jun	----	----	----	7 Jun	23 May	17 Jun
MACA	----	----	----	----	----	----	7 Jun	10 Jun	----
MATA	----	----	----	----	----	----	24 May	2 Jul	----
OPPO	----	25 Jun	----	Jun	----	20 Jul	7 Jun	12 Jun	20 Jun
ORHY	5 Jun	----	10 Jun	Jul	----	----	Jun	17 Jun	19 Jun
PHHO	----	----	----	----	----	----	----	27 Apr	2 May
PLPA	----	5 Jun	15 Jun	25 Jun	9 Jun	Jun	7 Jun	16 Jun	2 Jun
POSE	1 Jun	10 Jun	15 Jun	25 Jun	----	Jun	24 May	May	1 Jun
SAIB	----	----	----	----	----	----	----	----	----
SIAL	----	----	----	----	----	28 Jun	7 Jun	7 Jun	2 Jun
SIHY	----	25 Jun	15 Jun	15 Jun	----	----	7 Jun	5 Jun	17 Jun
SILI	----	----	May	10 Jul	9 Jun	----	----	----	----
SPCO	5 Jul	20 Jun	1 Jul	----	----	----	----	26 May	----
STCO	5 Jun	25 Jun	25 Jun	15 Jun	Jun	----	7 Jun	24 Jun	4 Jun
TAOF	----	----	----	----	----	----	----	6 May	7 May
TRDU	----	----	----	----	----	----	7 Jun	11 Jan	17 Jun
VUOC	----	10 Jun	12 Jun	25 Jun	----	----	24 May	27 May	2 Jun

TABLE VI. (Continued):

	STUDY AREA DEMER								
	Seed Dissemination								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	1 Nov	15 Aug	20 Aug	20 Aug	----	----	9 Aug	5 Sep	28 Jul
AGSP	1 Aug	30 Jul	5 Aug	30 Jul	11 Aug	20 Jul	17 Jul	5 Sep	14 Jul
ALTE	----	----	10 Jul	----	30 Jun	20 Jul	17 Jul	14 Jul	28 Jul
ARTR	15 Nov	15 Nov	10 Nov	Nov	----	1 Nov	----	----	----
ASMI	----	----	----	----	----	9 Aug	9 Aug	17 Aug	----
ASPU	----	----	----	----	----	----	27 Jun	----	----
BOGR	10 Aug	30 Jul	5 Aug	20 Aug	----	20 Jul	9 Aug	21 Jul	24 Aug
BRTE	24 Jun	5 Jul	10 Jul	30 JUL	30 Jun	20 Jul	27 Jun	21 Jul	25 Jul
CANU	----	----	----	----	----	20 Jul	9 Aug	8 Aug	30 Jul
CHFR	----	----	----	----	1 Oct	5 Sep	17 Jul	22 Aug	12 Sep
CIUN	----	----	----	----	----	----	----	----	----
CRFE	----	----	----	----	----	9 Aug	----	----	----
CYMO	----	----	20 Jun	----	----	----	----	13 Jun	----
DEGE	1 Aug	10 Jul	20 Jul	15 Jun	30 Jun	20 Jul	17 Jul	10 Jul	3 Aug
DEPI	----	----	----	----	----	20 Jul	17 Jul	16 Jul	4 Jul
ERPU	----	----	----	----	----	----	17 Jul	13 Jul	28 Jul
GIPU	----	----	----	----	----	2 Sep	Jul	----	----
HOJU	----	----	----	----	----	----	----	----	----
KOCR	----	----	----	----	----	----	17 Jul	----	14 Jul
LASC	----	----	----	----	----	----	1 Sep	18 Sep	12 Sep
LARE	Jul	15 Jul	20 Jul	20 Jul	20 Jul	9 Aug	27 Jun	16 Jul	5 Jul
LEDE	----	----	20 Jul	25 Jul	30 Jun	20 Jul	17 Jul	9 Jul	28 Jul
LUPU	----	----	20 Jul	----	----	----	9 Aug	9 Jul	14 Jul
MACA	----	----	----	----	----	----	17 Jul	----	----
MATA	----	----	----	----	----	----	----	----	----
OPPO	Aug	10 Aug	----	30 Jul	11 Aug	----	17 Jul	4 Sep	24 Aug
ORHY	20 Jul	----	20 Jul	Aug	20 Jul	9 Aug	17 Jul	13 Jul	28 Jul
PHHO	----	----	----	----	----	----	----	6 Jul	14 Jun
PLPA	10 Jul	15 Jul	29 Jul	10 Aug	30 Jun	20 Jul	9 Aug	1 Sep	28 Jul
POSE	1 Jul	1 Jul	1 Jul	10 Aug	30 Jun	20 Jul	27 Jun	12 Jul	24 Jul
SAIB	Jul	----	----	----	----	----	----	----	----
SIAL	----	----	----	----	----	----	17 Jul	2 Sep	10 Jul
SIHY	2 Aug	25 Jul	30 Jul	30 Jul	20 Jul	9 Aug	17 Jul	4 Sep	11 Aug
SILI	----	----	20 Jul	10 Aug	11 Aug	----	----	----	----
SPCO	30 Jul	15 Jul	25 Jul	----	----	----	----	14 Jul	----
STCO	25 Jul	20 Jul	20 Jul	30 Jul	20 Jul	20 Jul	17 Jul	28 Jul	28 Jul
TAOF	----	----	----	----	----	----	----	17 Jun	20 May
TRDU	----	----	----	----	----	9 Aug	27 Jun	25 Jul	14 Jul
VUOC	----	20 Jun	Jul	20 Jul	30 Jun	20 Jul	27 Jun	14 Jul	29 Jun

TABLE VI. (Continued):

STUDY AREA FARSON

	Growth Initiation								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	----	30 Mar	26 Apr	Apr	21 Apr	Apr	Apr	29 Apr	Apr
ALTE	----	----	----	Apr	21 Apr	Apr	----	----	Apr
ARHO	----	----	----	----	21 Apr	22 May	Apr	25 Apr	Apr
ARHO^2	----	----	May	May	18 May	Apr	----	22 Apr	Apr
ARTR	----	20 May	10 May	15 May	21 Apr	22 May	4 May	13 Apr	Apr
ASPU	----	15 Mar	30 Apr	Apr	Jul	Apr	----	Apr	Apr
ASSP	----	15 Mar	30 Apr	----	----	----	----	Apr	Apr
ATCO	----	27 Apr	26 Apr	Apr	7 Jun	Apr	4 May	25 Apr	Apr
CAEL	----	15 Apr	20 May	Apr	21 Apr	Apr	May	26 Apr	Apr
CAMI	----	----	----	----	----	----	----	----	----
CELA	----	27 Apr	30 Apr	15 May	18 May	Apr	May	26 Apr	Apr
CHLE	----	----	----	----	----	Jun	----	----	----
CHFR	----	Apr	----	----	----	----	----	----	----
CHVI	May	Apr	15 May	25 Apr	18 May	Apr	May	28 Apr	Apr
CRFL	----	----	----	----	----	22 May	----	May	----
CYMO	----	----	May	Apr	21 Apr	22 May	----	Apr	Apr
DEPI	----	----	----	----	----	Apr	----	Apr	Apr
ERCE	----	----	----	----	10 Aug	22 May	5 May	3 May	15 May
EROV	----	Apr	10 May	5 May	18 May	Apr	Apr	16 Apr	Apr
GACO	----	----	Apr	----	----	----	----	----	----
GIPU	----	----	----	----	----	----	----	----	----
GRSP	----	Apr	15 May	25 Apr	18 May	Apr	Apr	26 Apr	Apr
HAAC	----	Apr	10 May	Apr	18 May	Apr	----	29 May	Apr
KOCR	----	----	15 May	Apr	21 Apr	22 May	----	27 Apr	----
LARE	----	----	----	----	----	Apr	----	Apr	Apr
LEPU	----	----	MAY	----	----	Jun	May	27 Apr	Apr
MACA	----	----	----	----	----	----	----	----	May
OPFR	----	----	----	----	----	----	----	----	----
OPPO	May	27 Apr	10 May	Apr	18 May	22 May	4 May	1 Jun	26 May
ORHY	----	15 Apr	5 May	Apr	21 Apr	22 May	May	30 Apr	Apr
PECL	----	----	30 Apr	May	18 May	Apr	----	----	Apr
PHHO	May	30 May	5 May	Apr	18 May	22 May	----	26 Apr	Apr
POSE	----	15 Apr	5 May	Mar	21 Apr	Apr	May	Apr	Apr
SIHY	----	30 Mar	30 Apr	Apr	21 Apr	Apr	----	Apr	Apr
SILI	May	Apr	May	Apr	----	Apr	----	Apr	Apr
SPCO	----	10 May	5 May	May	Jul	Apr	----	----	Apr
STCO	----	15 Apr	5 May	Apr	21 Apr	22 May	Apr	29 Apr	Apr
TECA	----	----	----	----	----	----	----	----	----
TESP	----	----	----	----	----	----	----	29 Apr	Arp
XASA	----	----	----	----	18 May	Apr	Apr	26 Apr	----

TABLE VI. (Continued):

STUDY AREA FARSON

Species	Full Bloom 1973	 1974	 1975	 1976	 1977	 1978	 1979	 1980	 1981
AGSM	20 Jul	15 Jul	----	15 Jul	----	17 Jul	----	16 Jul	5 Jul
ALTE	----	----	25 Jun	25 May	----	7 Jun	Jun	18 Jun	16 Jun
ARHO	----	----	----	----	----	27 Jun	25 Jun	27 Jun	20 Jun
ARHO^2	----	----	----	10 Jul	----	7 Jun	22 May	7 Jun	26 May
ARTR	10 Sep	21 Sep	10 Sep	10 Sep	----	----	2 Sep	----	----
ASPU	Jun	23 May	10 Jun	20 Jun	----	Jun	5 Jun	10 Jun	20 May
ASSP	----	27 Apr	----	----	----	----	----	6 Jun	1 Jun
ATCO	20 Jul	10 Aug	20 Jun	Jul	----	----	5 Jun	5 Jul	28 Jun
CAEL	----	25 May	----	20 May	May	7 Jun	5 Jun	29 Jun	5 Jun
CAMI	----	----	----	----	----	----	----	----	----
CELA	10 Aug	10 Sep	30 Jul	----	Sep	----	5 Jun	24 Jun	14 Jul
CHLE	----	----	----	----	----	----	----	17 Jul	----
CHFR	15 Aug	----	----	----	----	----	----	----	----
CHVI	15 Aug	24 Aug	10 Aug	5 Aug	----	----	16 Jul	23 Jul	28 Jul
CRFL	----	----	----	----	----	----	----	----	----
CYMO	----	----	Jun	----	----	----	----	1 Jun	20 May
DEPI	----	----	----	----	----	27 Jun	----	1 Jun	16 Jun
ERCE	----	----	----	----	----	17 Jul	16 Jul	26 Jun	28 Jul
EROV	5 Jul	10 Jul	15 Jun	10 Jul	----	27 Jun	5 Jun	26 Jun	30 Jun
GACO	----	----	----	----	----	----	----	----	----
GIPU	----	----	----	----	----	----	----	----	----
GRSP	----	----	5 Jun	25 Jul	----	----	----	26 Jun	14 Jul
HAAC	----	----	20 Jun	Jul	----	Jun	----	16 Jun	----
KOCR	----	----	----	20 Jun	----	Jun	5 Jun	3 Jul	----
LARE	----	----	----	----	----	Jun	----	----	16 Jun
LEPU	----	----	----	----	----	Jun	25 Jun	17 Jun	20 Jun
MACA	----	----	----	----	----	----	----	12 Aug	16 Jun
OPFR	----	----	----	----	----	----	----	----	11 Aug
OPPO	25 Jul	10 Jul	Jul	5 Jul	----	----	25 Jun	4 Jul	4 Jul
ORHY	Jun	25 Jun	5 Jul	10 Jul	----	----	25 Jun	6 Jul	22 Jun
PECL	6 Jun	15 Jun	5 Jun	----	Apr	Jun	22 May	13 Jun	----
PHHO	----	5 Jun	10 Jun	1 Jun	----	7 Jun	4 May	1 Jun	26 May
POSE	Jun	6 Jun	20 Jun	25 Jun	----	Jun	5 Jun	18 Jun	20 Jun
SIHY	Jun	25 Jun	5 Jul	10 Jul	----	Jun	25 Jun	1 Jul	25 Jun
SILI	----	5 Jun	5 Jun	May	27 Jun	Apr	5 Jun	17 Jun	16 Jun
SPCO	----	10 Jun	5 Jul	Jun	----	27 Jun	----	28 Jun	20 Jun
STCO	10 Jul	30 Jun	10 Jul	Jul	----	----	----	30 Jun	4 Jul
TECA	----	----	----	----	----	----	----	----	----
TESP	----	----	----	----	----	----	25 Jun	5 Jul	14 Jul
XASA	----	----	----	----	----	Jul	16 Jul	----	----

TABLE VI. (Continued):

	STUDY AREA FARSON								
	Seed Dissemination								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	15 Oct	21 Sep	15 Oct	10 Sep	----	1 Sep	Aug	----	8 Aug
ALTE	----	----	Jul	10 Aug	----	17 Jul	----	15 Jul	20 Jul
ARHO	----	----	----	----	----	16 Aug	7 Aug	24 Aug	14 Jul
ARHO^2	----	----	----	10 Aug	----	17 Jul	----	20 Jul	14 Jul
ARTR	15 Nov	15 Nov	15 Nov	Nov	----	3 Nov	----	----	----
ASPU	Jun	30 Jun	20 Jun	5 Aug	----	17 Jul	25 Jun	1 Aug	16 Jun
ASSP	----	15 Jun	----	----	----	----	----	12 Jul	16 Jun
ATCO	15 Oct	Oct	Oct	Aug	----	3 Nov	----	Sep	11 Aug
CAEL	----	10 Jul	----	5 Aug	----	----	25 Jun	10 Sep	20 Jul
CAMI	----	----	----	----	----	----	Jul	----	----
CELA	20 Oct	26 Oct	Oct	----	6 Nov	3 Nov	7 Aug	----	----
CHLE	----	----	----	----	----	3 Nov	----	21 Sep	----
CHFR	----	15 Jul	----	----	----	----	----	----	----
CHVI	15 Oct	25 Sep	Sep	20 Sep	6 Nov	3 Nov	2 Sep	20 Sep	4 Oct
CRFL	----	----	----	----	----	----	----	----	----
CYMO	----	----	Jul	----	----	----	----	----	----
DEPI	----	----	----	----	----	17 Jul	----	----	18 Jul
ERCE	----	----	----	----	----	3 Nov	Sep	----	----
EROV	25 Jul	10 Jul	Jul	20 Aug	----	1 Sep	7 Aug	26 Aug	25 Aug
GACO	----	----	----	----	----	----	----	----	----
GIPU	----	----	----	----	----	----	----	Jun	----
GRSP	----	10 Nov	1 Aug	20 Sep	----	1 Sep	----	8 Aug	5 Sep
HAAC	----	20 Jun	Jul	20 Aug	----	17 Jul	25 Jun	20 Jul	----
KOCR	----	----	----	20 Aug	----	----	25 Jun	7 Aug	24 Aug
LARE	----	----	----	----	----	17 Jul	----	14 Jul	14 Jul
LEPU	----	----	Aug	----	----	3 Nov	16 Jul	10 Aug	14 Jul
MACA	----	----	----	----	----	----	----	Sep	4 Oct
OPFR	----	----	----	----	----	----	----	----	----
OPPO	Sep	24 Aug	15 Aug	15 Aug	6 Nov	----	7 Aug	21 Sep	24 Aug
ORHY	14 Oct	15 Jul	30 Jul	10 Aug	----	16 Aug	7 Aug	22 Aug	28 Jul
PECL	----	Jul	Jul	1 Aug	----	17 Jul	Jul	20 Aug	----
PHHO	27 Jun	5 Jul	Jul	10 Aug	----	25 Jun	25 Jun	25 Jul	14 Jul
POSE	20 Jul	20 Jul	20 Jul	5 Aug	----	17 Jul	16 Jul	15 Jul	28 Jul
SIHY	10 Aug	15 Jul	5 Aug	20 Aug	----	17 Jul	7 Aug	13 Aug	28 Jul
SILI	10 Jul	Jul	5 Jul	Jul	----	17 Jul	16 Jul	24 Jul	13 Jul
SPCO	----	10 Aug	30 Jul	20 Aug	6 Nov	----	25 Jun	19 Aug	14 Jul
STCO	10 Aug	15 Jul	30 Jul	15 Aug	----	17 Jul	7 Aug	27 Jul	28 Jul
TECA	----	----	----	----	----	16 Aug	----	----	----
TESP	----	----	----	----	----	----	16 Jul	Sep	12 Sep
XASA	----	----	----	----	----	----	Aug	----	----

TABLE VI. (Continued):

STUDY AREA HORSE CREEK

	Growth Intiation								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	----	5 Mar	Apr	Apr	----	Apr	----	----	Apr
ACSP	----	5 Mar	Apr	Mar	Mar	Mar	----	----	Apr
ALTE	----	----	----	Apr	----	Apr	----	----	----
ANDI	----	----	----	----	----	Apr	Apr	Apr	Apr
ARFE	----	15 Apr	Apr	Apr	Mar	----	----	Apr	Apr
ARHO[2]	----	----	----	----	Mar	----	----	----	Apr
ARNO	----	14 May	15 May	May	23 Apr	----	Apr	Apr	Apr
ARTR	----	20 May	20 May	May	23 Apr	Apr	Apr	Apr	Apr
ASPU	----	Apr	Apr	----	23 Apr	----	Apr	----	----
BRCO	----	----	Apr	----	----	----	----	----	----
BRJA	----	----	----	----	----	----	----	----	----
BRTE	----	----	Apr	May	Mar	Mar	Apr	Apr	Apr
CAAN	----	20 Mar	Apr	Apr	Mar	Mar	Apr	Apr	Apr
CANU	----	30 May	Apr	May	----	----	----	----	----
CELA	----	25 Apr	10 May	May	Apr	Apr	Apr	Apr	Apr
CHDE	----	----	----	May	May	Apr	----	----	----
CIUN	----	----	----	----	23 Apr	----	Apr	Apr	Apr
COPA	----	----	May	May	23 Apr	Mar	----	Apr	Apr
CROC	----	----	May	Apr	----	Apr	Apr	Apr	Apr
CRBR	----	----	Apr	----	23 Apr	----	Apr	Apr	Apr
CRFL	----	----	----	----	23 Apr	----	----	----	----
CRKE	----	----	----	----	----	----	----	----	----
DEPI	----	----	----	May	Apr	Apr	28 Apr	13 May	Apr
ERCE	----	----	----	----	----	----	----	16 May	----
ERPU	----	Apr	Apr	May	----	Apr	----	----	Apr
GACO	----	----	May	Apr	23 Apr	----	Apr	17 Apr	----
HAAC	----	----	----	----	23 Apr	----	Apr	----	Apr
LARE	----	----	----	May	17 May	Apr	----	21 Apr	Apr
LASE	----	----	----	----	----	----	May	----	----
LEDE	----	----	----	----	----	Apr	----	----	----
LERE	----	----	----	----	----	----	----	----	----
LIRU	----	----	----	----	----	----	----	----	----
LOOR	----	----	Apr	----	----	Apr	Apr	----	Apr
MACA	----	30 Mar	----	May	----	May	----	6 May	May
MAGR	----	----	Jun	May	----	May	----	----	Apr
OPPO	----	----	May	Apr	23 Apr	Apr	28 Apr	1 May	Apr
ORHY	----	5 Mar	Apr	May	----	----	----	----	Apr
PECL	----	----	Apr	Apr	Apr	Apr	Apr	----	Apr
PHHO	----	----	Apr	Apr	23 Apr	Apr	28 Apr	----	Apr
POSE	----	20 Feb	10 Mar	Apr	Mar	Apr	----	----	Apr
RHTR	----	----	----	----	----	----	----	----	Apr
SAIB	26 Jun	20 Jun	15 Jun	Jun	23 Apr	----	----	----	----

TABLE VI. (Continued):

STUDY AREA HORSE CREEK

	Growth Intiation								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
SIHY	----	5 Mar	Apr	May	Mar	Mar	----	----	Apr
SPCO	----	----	----	May	23 Apr	Apr	Apr	----	Apr
STCO	----	10 Mar	Apr	May	Mar	Apr	Apr	----	Apr
TRDU	----	20 May	15 May	Apr	----	Apr	Apr	18 Apr	Apr
VINU	----	5 Mar	----	Apr	Apr	Apr	Apr	----	Apr
XASA	----	----	----	----	23 Apr	Mar	Apr	12 Apr	Apr
YUGL	----	----	----	----	17 May	----	28 Apr	----	2 May
ZIVE	----	20 Apr	Apr	Apr	Mar	Apr	Apr	----	Apr

TABLE VI. (Continued):

	STUDY AREA HORSE CREEK								
	Full Bloom								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	25 Jun	5 Jul	10 Jul	----	----	Jul	Jun	----	3 Jul
AGSP	20 Jun	30 Jun	5 Jul	10 Jun	Jun	Jun	24 May	----	20 Jun
ALTE	----	----	9 Jun	May	----	Jun	24 May	----	----
ANDI	----	----	----	----	----	----	24 May	15 May	3 Jun
ARFE	20 Jun	10 Jul	15 Jul	Jul	----	----	Jun	23 Jun	29 Jun
ARHO[2]	----	----	----	----	----	----	----	5 Jun	----
ARNO	20 Sep	20 Sep	15 Sep	10 Oct	----	----	2 Sep	17 Sep	15 Sep
ARTR	10 Sep	20 Sep	20 Sep	10 Oct	----	24 Sep	2 Sep	17 Sep	25 Sep
ASPU	----	20 May	25 Sep	----	----	----	7 Jun	----	3 Jun
BRCO	----	25 Jun	Jun	----	----	----	----	----	----
BRJA	----	----	----	----	----	----	----	----	29 Jun
BRTE	----	15 Jun	30 Jun	May	----	----	24 May	8 Jun	15 Jun
CAAN	----	5 Jun	10 Jun	10 Jun	8 Jun	Jun	7 Jun	25 May	3 Jun
CANU	20 Jun	15 Jun	5 Jul	Jun	----	30 Jun	7 Jun	8 Jun	----
CELA	25 Jul	20 Jul	20 Jul	25 Sep	----	20 Jul	9 Aug	25 Jul	28 Jul
CHDE	----	----	5 Jul	Jun	8 Jun	----	----	29 Jun	14 Jul
CIUN	----	----	----	----	----	----	27 Jun	22 Jul	29 Jun
COPA	----	----	30 Jun	----	17 May	----	----	----	----
CRAC	----	25 May	25 Jun	10 Jun	----	30 Jun	----	----	15 Jun
CRBR	30 Jun	10 Jun	10 Jun	----	8 Jun	----	24 May	25 May	29 Jun
CRFL	----	----	----	----	----	----	----	----	----
CRKE	----	----	----	----	----	----	----	----	----
DEPI	30 Jun	----	5 Jun	10 Jun	May	Jun	24 May	10 Jun	15 May
ERCE	----	----	----	----	----	----	2 Sep	27 Jul	----
ERPU	25 Jun	20 Jun	25 Jun	7 Jun	----	30 Jun	24 May	29 Jun	15 Jun
GACO	----	5 Jun	30 Jun	Jun	8 Jun	----	27 Jun	13 Jun	5 Jul
HAAC	----	----	----	----	----	----	24 May	20 May	19 May
LARE	26 Jun	----	20 Jun	Jun	----	Jun	24 May	1 Jun	3 Jun
LASE	----	----	----	----	----	10 Aug	----	----	----
LEDE	----	----	----	----	----	----	----	----	----
LERE	----	----	30 Jun	----	----	----	----	----	----
LIRU	----	----	----	----	----	----	7 Jun	17 Jun	----
LOOR	----	----	5 Jun	----	----	----	24 May	31 May	25 May
MACA	25 Jun	20 Jun	----	10 Jul	----	20 Jul	7 Jun	10 Jul	29 Jun
MAGR	----	20 Jun	Jul	----	----	----	----	21 Jun	12 Jul
OPPO	5 Jun	20 Jun	9 Jun	1 Jul	----	30 Jun	27 Jun	15 Jun	29 Jun
ORHY	----	5 Jun	1 Jul	Jun	8 Jun	----	7 Jun	----	7 Jun
PECL	----	----	15 Jul	12 Jun	8 Jun	Jun	----	21 Jun	15 Jun
PHHO	----	30 May	5 Jun	10 Jun	----	25 May	24 May	7 May	2 May
POSE	----	20 Jun	25 Jun	15 Jun	8 Jun	----	24 May	----	4 Jun
RHTR	----	----	----	----	----	----	----	----	----
SAIB	----	25 Aug	5 Aug	25 Aug	17 Sep	----	18 Jul	----	----

TABLE VI. (Continued):

STUDY AREA HORSE CREEK

	Full Bloom								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
SIHY	20 Jun	1 Jul	5 Jul	10 Jun	8 Jun	----	7 Jun	----	29 Jun
SPCO	----	5 Jul	5 Jul	10 Jun	8 Jun	----	7 Jun	Jun	----
STCO	20 Jun	1 Jul	1 Jul	15 Jun	Jun	----	7 Jun	----	10 Jun
TRDU	----	15 Jun	30 Jun	Jun	----	Jun	24 May	10 Jul	29 Jun
VINU	----	20 Jun	25 Jun	Jun	17 May	----	----	2 May	18 May
XASA	----	----	----	----	17 Sep	24 Sep	2 Sep	16 Aug	12 Sep
YUGL	----	----	----	----	8 Jun	----	----	16 Jun	----
ZIVE	----	30 May	30 May	23 May	----	----	27 Jun	----	2 May

TABLE VI. (Continued):

STUDY AREA HORSE CREEK									
Seed Dissemination									
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	10 Nov	20 Aug	20 Aug	15 Aug	----	3 Sep	Jul	----	11 Aug
AGSP	30 Jul	10 Jul	15 Jul	30 Jul	20 Jul	10 Aug	27 Jun	----	14 Jul
ALTE	----	----	10 Jul	20 Jul	----	20 Jul	27 Jun	----	----
ANDI	----	----	----	----	----	----	27 Jun	9 Jul	----
ARFE	1 Aug	15 Jul	20 Jul	10 Aug	30 Jun	----	18 Jul	----	12 Sep
ARHO^2	----	----	----	----	8 Jun	----	----	17 Jul	29 Sep
ARNO	5 Nov	5 Nov	5 Nov	Nov	----	----	----	----	----
ARTR	20 Nov	10 Nov	5 Nov	Nov	----	----	----	----	----
ASPU	25 Jun	15 Jun	20 Jun	----	8 Jun	----	Jul	----	28 Jul
BRCO	2 Aug	25 Jul	20 Jul	----	----	----	----	----	----
BRJA	----	----	----	----	----	10 Aug	----	----	14 Jul
BRTE	25 Jul	5 Jul	10 Jul	5 Jul	30 Jun	20 Jul	27 Jun	12 Jul	----
CAAN	20 Jul	25 Jul	15 Jul	2 Jul	30 Jun	20 Jul	27 Jun	----	28 Jul
CANU	15 Jul	15 Jul	20 Jul	5 Aug	----	20 Jul	27 Jun	14 Jul	----
CELA	20 Sep	20 Sep	20 Sep	Nov	----	----	----	----	----
CHDE	----	----	25 Jul	Aug	----	3 Sep	27 Jun	----	25 Sep
CIUN	----	----	----	----	30 Jun	----	18 Jul	2 Sep	11 Aug
COPA	----	----	Jul	20 Sep	----	----	18 Jul	----	----
CRAC	----	Jun	Jul	10 Jul	----	20 Jul	27 Jun	----	29 Jun
CRBR	2 Aug	5 Jul	10 Jul	----	30 Jun	----	18 Jul	17 Jul	19 May
CRFL	----	----	----	----	30 Jun	----	----	----	----
CRKE	----	----	----	----	----	----	----	----	----
DEPI	Jul	----	10 Jul	10 Jul	30 Jun	20 Jul	27 Jun	Jul	1 Jul
ERCE	----	----	----	----	----	----	----	Sep	----
ERPU	20 Jul	10 Jul	10 Jul	30 Jul	----	20 J71	27 Jun	16 Jul	1 Aug
GACO	30 Jun	5 Aug	25 Jul	20 Aug	20 Jun	----	18 Jul	----	4 Aug
HAAC	----	----	----	----	8 Jun	----	Jun	5 Jun	10 Jun
LARE	23 Jul	----	25 Jul	25 Jul	30 Jun	20 Jul	27 Jun	----	25 Jul
LASE	----	----	----	----	----	----	----	----	----
LEDE	----	----	----	----	----	20 Jul	27 Jun	----	20 Jul
LERE	----	----	25 Jul	----	----	----	----	----	----
LIRU	----	----	----	----	----	----	----	28 Aug	----
LOOR	----	----	----	----	----	20 Jul	7 Jun	----	3 Jun
MACA	25 Jul	25 Jul	----	20 Aug	----	----	18 Jul	----	14 Jul
MAGR	----	Jul	----	25 Aug	----	----	----	----	25 Aug
OPPO	----	20 Aug	10 Sep	10 Aug	20 Jul	24 Sep	18 Jul	21 Aug	12 Sep
ORHY	5 Aug	15 Jul	25 Jul	15 Aug	20 Jul	24 Sep	27 Jun	----	14 Jul
PECL	----	----	----	----	30 Jun	----	27 Jun	24 Jul	5 Jul
PHHO	26 Jun	15 Jun	5 Jul	25 Jun	30 Jun	30 Jun	27 Jun	22 Jul	25 Jun
POSE	15 Jul	5 Jul	5 Jul	5 Aug	30 Jun	10 Aug	27 Jun	----	14 Jul
RHTR	----	----	----	----	----	----	----	----	----
SAIB	----	Sep	----	Sep	----	----	----	----	----

TABLE VI. (Continued):

STUDY AREA HORSE CREEK

Seed Dissemination

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
SIHY	5 Aug	10 Jul	15 Jul	30 Jul	10 Aug	----	18 Jul	----	28 Jul
SPCO	1 Aug	25 Jul	25 Jul	25 Jul	10 Aug	20 Jul	----	----	----
STCO	5 Aug	15 Jul	15 Jul	15 Aug	20 Jun	----	27 Jun	17 Jul	14 Jul
TRDU	----	15 Jul	15 Jul	15 Jul	----	20 Jul	27 Jun	26 Jul	28 Jul
VINU	25 Jun	10 Jul	10 Jul	15 Jul	8 Jun	----	----	28 Jun	3 Jun
XASA	----	----	----	----	----	----	----	----	----
YUGL	----	----	----	----	30 Jun	----	----	Jul	----
ZIVE	10 Jul	10 Jul	10 Jul	20 Jun	8 Jun	20 Jul	----	----	6 Jun

TABLE VI. (Continued):

STUDY AREA MESA ANTELOPE									
	Growth Initiation								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	----	30 Mar	Mar	Apr	21 Apr	Apr	Apr	26 Apr	Apr
ALTE	----	----	----	----	21 Apr	----	----	----	----
ARNO	----	----	Jun	----	----	----	----	----	----
ARHO	----	----	----	----	Aug	----	----	----	----
ARHO²	----	----	----	May	----	Apr	----	Apr	Apr
ARTR	May	23 May	May	May	21 Apr	22 May	Apr	Apr	Apr
ASCI	----	----	----	----	-----	May	----	----	----
ASPU	----	----	----	----	----	----	----	----	----
ASSP	----	----	----	May	21 Apr	22 May	----	Apr	Apr
ATGA	----	----	----	May	----	Jun	----	Apr	Apr
CAEL	----	May	May	Apr	21 Apr	22 May	May	23 Apr	Apr
CELA	May	20 May	May	May	May	Apr	May	Apr	Apr
CHVI	May	23 May	May	May	May	22 May	----	Apr	Apr
CORA	----	----	----	----	----	Jun	----	----	Apr
ERCA²	----	Mar	----	Apr	May	22 May	----	Apr	May
ERCE	----	----	----	----	----	----	----	----	----
EROV	----	Mar	----	May	21 Apr	22 May	Apr	Apr	Apr
GIPU	----	----	----	----	----	----	----	----	----
HAAC	----	----	----	Apr	21 Apr	May	Apr	Apr	Apr
LARE	----	----	----	----	----	----	----	----	----
LEAL	----	----	----	----	----	----	----	----	----
LEPU	----	May	May	----	May	May	Apr	Apr	Apr
LOOR	----	----	----	----	----	----	----	May	Apr
MACA	May	----	----	Jun	May	May	May	Apr	Apr
MATA	----	----	----	----	May	----	----	----	----
OPPO	----	May	----	May	May	22 May	4 May	11 May	26 May
ORHY	----	30 Mar	----	Apr	21 Apr	22 May	May	23 Apr	Apr
PELA	----	----	----	May	21 Apr	----	----	----	Apr
PHHO	----	30 Mar	----	Apr	21 Apr	22 May	----	Apr	Apr
POFE	----	----	----	----	----	22 May	----	Apr	Apr
POSE	----	Mar	----	Apr	21 Apr	Apr	Apr	23 Apr	Apr
SIHY	----	Mar	----	Apr	21 Apr	Apr	Apr	24 Apr	Apr
SILI	----	----	----	Apr	----	Apr	----	----	Apr
SPCO	----	----	----	----	----	Jun	----	----	May
STCO	----	30 Mar	----	Apr	21 Apr	Apr	----	27 Apr	Apr
TRGY	----	----	----	Apr	May	22 May	----	Apr	Apr

TABLE VI. (Continued):

STUDY AREA MESA ANTELOPE

	Full Bloom								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	Jul	Jul	Jul	----	----	----	----	----	----
ALTE	----	----	----	----	----	----	----	18 Jun	----
ARNO	----	----	----	----	----	----	----	----	----
ARHO	----	----	----	----	----	----	----	----	----
ARHO^2	Jun	----	15 Jun	Jun	----	6 Jun	5 Jun	19 Jun	16 Jun
ARTR	10 Sep	20 Sep	10 Sep	10 Sep	7 Sep	Aug	1 Sep	Aug	4 Oct
ASCI	----	----	----	----	----	6 Jun	----	----	----.
ASPU	----	----	15 Jun	----	----	----	----	----	----
ASSP	----	----	15 Jun	----	----	6 Jun	Jun	18 Jun	20 Jun
ATGA	1 Aug	----	----	25 Jul	----	26 Jun	----	----	----
CAEL	Jun	Jun	Jun	20 Jun	----	6 Jun	5 Jun	----	----
CELA	1 Aug	Aug	Jul	25 Aug	----	----	5 Jun	15 Jul	5 Jun
CHVI	10 Sep	Sep	1 Sep	30 Aug	9 Aug	8 Aug	15 Jul	10 Jul	24 Aug
CORA	----	----	----	----	----	----	----	22 Jul	15 Aug
ERCA^2	----	25 May	15 Jun	20 Jul	Jun	26 Jun	22 May	Jul	16 Jun
ERCE	----	----	----	----	----	----	----	24 Jul	30 Jun
EROV	Jun	30 May	20 Jun	13 Jul	----	26 Jun	5 Jun	26 Jun	20 Jun
GIPU	----	----	----	----	----	----	----	19 Jun	----
HAAC	----	----	15 Jun	12 Jun	----	26 Jun	5 Jun	18 Jun	16 Jun
LARE	----	----	----	----	----	----	----	Jun	----
LEAL	----	----	----	----	----	----	Jun	----	----
LEPU	Jun	15 Jun	30 Jun	----	----	26 Jun	5 Jun	3 Jul	5 Jul
LOOR	----	----	----	----	May	----	22 May	18 Jun	1 Jun
MACA	15 AUG	1 Jun	20 Jun	20 Aug	9 Aug	8 Aug	7 Aug	25 Jul	28 Jul
MATA	----	----	----	----	----	----	----	----	----
OPPO	1 Aug	Jul	Jul	20 Jul	19 Jul	Jul	15 Jul	17 Jul	5 Jul
ORHY	10 Jul	30 Jun	5 Jul	1 Jul	Jun	----	25 Jun	11 Jul	30 Jun
PELA	17 Jul	Jul	----	22 Jul	Sep	----	7 Aug	1 Jul	16 Jun
PHHO	----	12 May	15 Jun	10 Jun	7 Jun	6 Jun	22 May	May	26 May
POFE	----	----	----	----	----	Jun	5 Jun	23 Jun	20 Jun
POSE	20 Jun	10 Jun	30 Jun	20 Jun	----	26 Jun	25 Jun	21 Jun	27 Jun
SIHY	Jul	Jul	Jul	1 Jul	28 Jun	----	25 Jun	9 Jul	25 Jun
SILI	30 Jun	----	Jun	10 Jun	----	26 Jun	4 Jun	19 Jun	16 Jun
SPCO	----	----	----	----	----	Jun	----	----	----
STCO	10 Jul	Jul	Jul	1 Jul	19 Jul	----	25 Jun	7 Jul	4 Jul
TRGY	----	----	5 Jun	----	----	----	----	14 Jun	10 Jun

TABLE VI. (Continued):

STUDY AREA MESA ANTELOPE									
	Seed Dissemination								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	Sep	Aug	10 Aug	----	----	----	----	----	28 Jul
ALTE	----	----	----	----	28 Jun	----	----	24 Jul	----
ARNO	----	----	----	----	----	----	----	----	----
ARHO	----	----	----	----	----	----	----	----	----
ARHO²	Jul	----	Jul	5 Aug	----	17 Jul	Jul	26 Jul	14 Jul
ARTR	14 Oct	5 Nov	5 Nov	10 Nov	5 Nov	4 Nov	----	----	----
ASCI	----	----	----	----	----	----	----	----	----
ASPU	----	----	Jul	----	----	----	----	----	----
ASSP	----	----	Jul	Oct	----	----	15 Jul	25 Jul	28 Jul
ATGA	----	----	----	30 Sep	----	8 Aug	----	----	----
CAEL	Jul	Jul	Jul	Aug	19 Jul	8 Aug	25 Jun	----	11 Aug
CELA	Oct	Oct	25 Oct	Oct	5 Nov	4 Nov	15 Jul	Aug	4 Oct
CHVI	14 Oct	Oct	Oct	Oct	5 Nov	30 Aug	7 Aug	21 Sep	12 Sep
CORA	----	----	----	----	----	----	----	12 Aug	14 Jul
ERCA²	10 Aug	20 Jun	Jul	Oct	19 Jul	8 Aug	25 Jun	----	14 Jul
ERCE	----	----	----	----	----	----	----	----	14 Jul
EROV	25 Jul	Jul	Jul	Oct	----	8 Aug	25 Jun	Aug	14 Jul
GIPU	----	----	----	----	----	----	----	26 Jul	----
HAAC	Jul	----	Jul	13 Jul	----	17 Jul	25 Jun	25 Jul	8 Jul
LARE	----	----	----	----	----	----	----	23 Jul	----
LEAL	----	----	----	----	----	----	----	----	----
LEPU	Jul	Jul	10 Aug	----	----	8 Aug	15 Jul	12 Aug	14 Jul
LOOR	----	----	----	----	----	----	----	----	30 Jun
MACA	----	Oct	1 Oct	5 Sep	5 Nov	4 Nov	1 Sep	17 Sep	24 Aug
MATA	----	----	----	----	----	----	----	----	----
OPPO	Sep	Sep	Aug	30 Sep	7 Sep	----	7 Aug	21 Sep	24 Aug
ORHY	10 Aug	----	1 Aug	20 Aug	5 Nov	8 Aug	15 Jul	3 Aug	28 Jul
PELA	----	----	----	20 Aug	5 Nov	----	1 Sep	9 Sep	20 Aug
PHHO	20 Jul	20 Jun	30 Jul	30 Jul	28 Jun	17 Jul	25 Jun	25 Jul	14 Jul
POFE	----	----	----	----	----	8 Aug	15 Jul	26 Jul	14 Jul
POSE	1 Aug	----	Jul	20 Aug	28 Jun	17 Jul	15 Jul	28 Jul	8 Jul
SIHY	5 Aug	----	4 Aug	15 Aug	19 Jul	17 Jul	15 Jul	12 Aug	14 Jul
SILI	10 Jul	----	----	10 Aug	----	17 Jul	----	----	14 Jul
SPCO	----	----	----	----	----	----	----	----	----
STCO	15 Aug	----	Jul	1 Aug	7 Sep	17 Jul	15 Jul	3 Aug	14 Jul
TRGY	15 Jul	----	20 Jun	----	----	----	----	----	30 Jun

TABLE VI. (Continued):

STUDY AREA OWL DRAW

	Growth Initiation								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
ACLA	----	----	----	----	----	----	----	----	----
ACMI	----	----	----	----	----	----	----	May	Apr
AGGL	----	----	----	----	----	----	----	----	Apr
AGSM	----	----	Apr	Apr	17 Apr	Apr	Apr	----	Apr
AGSP	----	----	Apr	Mar	17 Apr	Apr	Apr	----	Apr
ALCE	----	----	----	----	----	----	----	----	----
ALTE	----	----	----	----	Mar	Apr	Apr	----	Apr
ANRO	----	----	----	----	Apr	26 May	----	----	----
ARHO	----	----	----	----	Apr	May	Apr	----	Apr
ARHO^2	----	----	----	May	Mar	May	----	----	----
ARNO	----	30 May	May	May	18 May	26 May	Apr	22 Apr	15 Apr
ARTR	----	30 May	May	May	16 May	26 May	Apr	19 Apr	15 Apr
ASPU	----	----	Apr	Apr	Apr	Apr	Apr	Apr	Apr
AST	----	----	Apr	Apr	Apr	Apr	----	----	----
ASDR	----	----	Apr	Apr	Apr	----	Apr	----	May
ASMI^2	----	----	Apr	Apr	Apr	Apr	----	----	Apr
BASA	----	5 Jun	1 Jun	May	Apr	Apr	Apr	Apr	Apr
CACH	----	----	----	Apr	17 Apr	Apr	Apr	Apr	Apr
CAMI	----	----	----	----	----	----	----	----	----
CANU	----	May	May	May	17 Apr	----	Apr	Apr	Apr
CELA	----	----	May	May	15 May	----	Apr	Apr	Apr
CHDO	----	----	----	----	----	May	----	Apr	----
CHVI	----	May	May	May	17 May	----	----	Apr	Apr
CIUN	----	----	----	----	Apr	May	May	Apr	May
CORA	----	----	----	----	----	----	----	----	----
CRBR	----	----	----	----	----	----	----	Apr	Apr
CRMO	----	May	May	May	Apr	Apr	Apr	Apr	Apr
CYMO	----	May	May	May	Apr	Apr	----	----	Apr
DEPI	----	Jun	----	----	----	----	----	May	May
DOCO	----	Jun	----	----	Apr	----	----	Apr	----
EROC	----	----	----	May	17 Apr	Apr	----	Apr	Apr
GICO	----	----	----	----	----	----	----	May	----
GRSQ	----	----	----	----	----	----	----	May	----
HAAC	----	May	May	May	17 Apr	Apr	Apr	Apr	Apr
JUOS	----	May	May	May	16 May	----	Apr	May	Apr
JUSC	----	May	May	May	16 May	26 May	----	----	----
KOCR	----	----	Apr	Apr	17 Apr	26 May	Apr	Apr	Apr
LARE	----	----	----	----	----	----	----	May	May
LASC	----	----	----	----	----	----	Apr	----	----
LERE	----	----	----	May	17 Apr	26 May	----	Apr	Apr
LILE	----	May	May	Jun	17 Apr	Apr	Apr	----	Apr
MAVI	----	----	----	----	----	----	----	----	----
MAGR	----	May	May	Jun	17 Apr	----	----	Apr	Apr
MELO	----	----	----	----	----	26 May	Apr	Apr	Apr
OPPO	----	----	May	May	16 May	26 May	5 May	29 May	25 May
ORHY	----	----	Apr	Apr	17 Apr	26 May	Apr	----	15 Apr
OXLA	----	----	----	----	----	----	----	Apr	Apr

TABLE VI. (Continued):

STUDY AREA OWL DRAW									
	Growth Initiation								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
PECL	----	----	----	----	17 Apr	Apr	Apr	Apr	Apr
PELA	----	----	May	May	----	----	----	----	Apr
PHHO	----	----	May	May	17 Apr	26 May	Apr	Apr	Apr
PHMU	----	----	----	----	----	----	----	----	Apr
POFE	----	----	Apr	Apr	17 Apr	Apr	Apr	Apr	Apr
POSE	----	----	Apr	Apr	17 Apr	Apr	----	Apr	Apr
SECA	----	----	May	Apr	Apr	Apr	Apr	May	----
SELA	----	----	----	Apr	17 Apr	Apr	May	May	----
SPCO	----	----	Apr	Apr	16 May	Apr	----	May	Apr
STCO	----	----	Apr	Apr	17 Apr	----	Apr	Apr	15 Apr
STVI	----	----	----	----	----	----	----	Apr	----
TAOF	----	----	----	----	----	----	----	May	Apr
TRDU	----	----	----	Jun	----	----	----	May	Apr
TRGY	----	----	----	----	Apr	Apr	Apr	Apr	Apr
VIAM	----	----	May	May	Apr	Apr	----	May	Apr
VINU	----	----	----	----	Mar	Apr	Apr	----	Apr
XASA	----	----	----	----	----	Apr	Apr	Apr	----
ZIVE	----	----	----	----	----	Apr	Apr	Apr	Apr

TABLE VI. (Continued):

STUDY AREA OWL DRAW

	Full Bloom								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
ACLA	----	----	----	----	----	----	----	----	----
ACMI	----	----	----	----	----	----	----	----	----
AGGL	----	----	----	----	----	----	----	8 Jun	15 Jun
AGSM	16 Jul	5 Jul	17 Jul	17 Jul	----	----	28 Jun	Jun	----
AGSP	5 Jul	5 Jul	14 Jul	Jul	----	Jul	----	25 Jun	2 Jul
ALCE	----	----	----	----	----	----	10 Aug	28 Jul	13 Jul
ALTE	----	----	----	----	----	----	25 May	11 Jun	15 Jun
ANRO	----	----	----	----	----	----	----	----	----
ARHO	----	1 Jun	15 Jul	14 Jul	----	1 Jul	----	19 Jun	15 Jun
ARHO^2	----	----	Jun	Jun	----	----	----	May	----
ARNO	----	20 Sep	20 Sep	5 Sep	----	29 Sep	Sep	22 Sep	1 Sep
ARTR	----	20 Sep	20 Sep	5 Sep	18 Sep	29 Sep	Sep	24 Sep	25 Sep
ASPU	----	May	25 May	10 Jun	----	9 Jun	26 May	21 May	20 May
AST	----	Jun	10 Jun	10 Jun	----	----	----	----	----
ASDR	----	Jun	10 Jun	15 Jul	----	----	----	20 Jun	10 Aug
ASMI^2	----	Jun	10 Jun	Jul	----	1 Jul	25 May	26 Jun	8 Jul
BASA	----	Jun	Jun	Jun	16 May	Jun	Jun	1 Jun	8 Jul
CACH	----	----	6 Jun	25 Jun	----	1 Jul	25 May	4 Jun	15 Jun
CAMI	----	----	----	----	----	----	----	----	15 Jun
CANU	16 Jul	4 Jul	14 Jul	1 Jul	2 Jul	----	28 Jun	30 Jun	28 Jun
CELA	----	Jun	5 Jul	30 Jul	Jul	11 Aug	----	7 Jul	15 Aug
CHDO	----	----	----	----	----	1 Jul	----	21 Jun	27 Jul
CHVI	Aug	Aug	Aug	25 Aug	12 Aug	----	----	----	11 Sep
CIUN	----	----	----	----	----	----	28 Jun	22 Jun	28 Jun
CORA	----	----	----	----	----	11 Aug	----	----	----
CRBR	----	Jun	Jun	----	----	----	12 Jun	10 Jun	15 Jun
CRMO	----	Jun	Jun	Jun	----	----	12 Jun	6 Jun	15 Jun
CYMO	----	Jun	5 Jun	10 Jun	May	Jun	----	30 Apr	20 May
DEPI	Jul	Jun	----	----	----	----	----	4 Jun	8 Jun
DOCO	Jul	Jun	----	----	16 May	----	----	6 May	----
EROC	----	----	10 Jun	5 Jun	May	1 Jul	25 May	18 May	15 Jun
GICO	----	----	----	----	----	----	----	19 Jun	----
GRSQ	----	----	----	----	----	11 Aug	10 Aug	12 Aug	----
HAAC	----	10 Jun	15 Jun	Jun	----	1 Jul	12 Jun	2 Jun	15 Jun
JUOS	----	Jul	5 Jul	15 Jul	----	----	----	----	----
JUSC	----	Jul	5 Jul	15 Jul	----	----	----	----	----
KOCR	Jul	5 Jun	Jun	Jun	----	1 Jul	----	15 Jun	28 Jun
LARE	----	----	----	----	----	----	----	5 Jun	8 Jun
LASC	----	----	----	----	----	----	----	----	----
LERE	20 Jul	20 Jun	5 Jul	Jun	17 Apr	----	Jun	15 Jun	15 Jun
LILE	----	Jun	25 Jun	1 Jul	----	1 Jul	Jun	11 Jun	----
MAVI	----	Jul	1 Jul	----	----	----	----	----	----
MAGR	----	15 Jun	10 Jun	Jun	----	----	28 Jun	4 Jul	28 Jun
MELO	----	----	----	----	----	Jun	25 May	8 May	15 May
OPPO	----	Jun	Jun	10 Jul	----	----	----	28 Jun	28 Jun
ORHY	----	25 Jun	Jun	10 Jul	----	----	----	23 Jun	4 Jul

TABLE VI. (Continued):

	STUDY AREA OWL DRAW								
	Full Bloom								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
OXLA	----	----	----	----	----	----	12 Jun	26 May	25 May
PECL	----	25 Jun	Jun	10 Jul	----	Jun	----	3 Jun	15 Jun
PELA	----	Jun	30 Jun	1 Jul	----	----	----	10 Jun	15 Jun
PHHO	----	1 Jun	1 Jun	5 Jun	----	9 Jun	May	7 May	1 May
PHMU	----	----	----	----	----	----	----	25 May	8 Jun
POFE	----	15 Jun	10 Jun	10 Jun	May	----	25 May	25 May	8 Jun
POSE	----	17 Jun	10 Jun	8 Jun	----	----	25 May	1 Jun	15 Jun
SECA	10 Jul	10 Jun	15 Jun	3 Jun	----	----	25 May	1 Jun	----
SELA	----	----	30 Jun	1 Jul	----	Jul	Jun	17 Jun	----
SPCO	----	25 Jun	25 Jun	25 Jun	----	1 Jul	----	Jun	28 Jun
STCO	----	25 Jun	25 Jun	25 Jun	----	----	28 Jun	22 Jun	8 Jun
STVI	----	----	----	----	----	----	----	23 Jun	----
TAOF	----	----	----	----	----	----	----	6 Jun	----
TRDU	----	----	Jun	20 Jul	----	----	12 Jun	28 Jun	----
TRGY	----	----	Jun	5 Jun	----	----	----	26 May	20 May
VIAM	----	10 Jun	15 Jun	Jun	----	1 Jul	12 Jun	5 Jun	15 Jun
VINU	----	----	----	----	16 May	Jul	----	----	25 May
XASA	----	----	----	----	----	----	10 Aug	25 Jul	27 Jul
ZIVE	----	----	----	----	----	----	----	----	8 Jun

TABLE VI. (Continued):

STUDY AREA OWL DRAW

Species	Seed Dissemination 1973	1974	1975	1976	1977	1978	1979	1980	1981
ACLA	----	----	----	----	----	4 Sept	19 Jul	----	----
ACMI	----	----	----	----	----	----	----	----	----
AGGL	----	----	----	----	----	----	----	----	----
AGSM	----	5 Aug	25 Jul	Oct	12 Aug	4 Sep	10 Aug	Sep	28 Jun
AGSP	3 Aug	25 Jul	28 Jul	25 Aug	18 Jul	4 Sep	----	20 Aug	10 Aug
ALCE	----	----	----	----	----	----	----	----	11 Sep
ALTE	----	----	----	----	12 Aug	29 Sep	12 Jun	21 Jul	13 Jul
ANRO	----	----	----	----	18 Jul	----	28 Jun	----	----
ARHO	----	20 Jun	30 Jul	2 Aug	18 Jul	24 Jul	Jun	13 Aug	27 Jul
ARHO^2	----	Jul	25 Jul	30 Jul	2 Jul	----	----	9 Jul	28 Jun
ARNO	----	----	----	Nov	17 Nov	----	22 Sep	----	----
ARTR	----	----	----	Nov	17 Nov	----	22 Sep	----	----
ASPU	----	Jul	20 Jul	25 Jul	2 Jul	11 Aug	12 Jun	21 Jul	10 Aug
AST	----	Jul	30 Jul	10 Aug	18 Jul	11 Aug	----	----	----
ASDR	----	Jul	10 Jul	25 Aug	2 Jul	----	----	23 Jul	----
ASMI^2	----	Jul	10 Jul	15 Aug	2 Jul	4 Sep	----	----	4 Jul
BASA	----	Jul	Jul	12 Jul	2 Jul	24 Jul	12 Jun	13 Jul	28 Jun
CACH	----	Jul	28 Jul	25 Jul	2 Jul	24 Jul	28 Jun	27 Jul	10 Aug
CAMI	----	Jul	14 Jul	----	----	1 Jul	----	----	----
CANU	----	10 Aug	Aug	10 Aug	18 Jul	11 Aug	19 Jul	16 Aug	10 Aug
CELA	----	Sep	20 Sep	Sep	----	----	----	23 Aug	24 Aug
CHDO	----	----	----	----	----	24 Jul	----	----	1 Sep
CHVI	----	Sep	25 Sep	10 Oct	----	----	----	----	----
CIUN	----	----	----	----	12 Aug	11 Aug	Aug	9 Aug	13 Jul
CORA	----	----	----	----	----	4 Sep	----	----	----
CRBR	----	Jul	Jul	----	----	----	19 Jul	17 Aug	10 Aug
CRMO	----	Jul	14 Jul	17 Jul	2 Jul	24 Jul	28 Jun	22 Jul	28 Jun
CYMO	----	Jun	1 Jul	20 Jul	2 Jul	24 Jul	----	27 Jun	15 Jun
DEPI	----	Jul	----	----	----	----	----	11 Jul	27 Jul
DOCO	----	Jul	----	----	2 Jul	----	----	8 Jul	----
EROC	----	----	20 Jul	21 Jul	2 Jul	24 Jul	28 Jun	11 Jul	13 Jul
GICO	----	----	----	----	----	----	19 Jul	29 Aug	----
GRSQ	----	----	----	----	----	----	----	----	----
HAAC	Jul	10 Jul	5 Jul	20 Jul	2 Jul	24 Jul	Jul	10 Jul	28 Jun
JUOS	----	Aug	Aug	Oct	2 Jul	----	28 Jun	----	11 Sep
JUSC	----	Aug	Aug	Oct	18 Jul	----	----	----	----
KOCR	1 Aug	15 Jun	20 Jul	20 Aug	2 Jul	24 Jul	28 Jun	17 Aug	13 Jul
LARE	----	----	----	----	----	----	----	----	28 Jun
LASC	----	----	----	----	----	4 Sep	----	----	----
LERE	Aug	10 Jul	20 Jul	15 Jul	2 Jul	24 Jul	Jul	22 Jul	11 Sep
LILE	----	Jul	25 Jul	10 Aug	2 Jul	24 Jul	19 Jul	28 Jul	10 Aug
MAVI	----	Jul	Jul	----	----	----	----	----	----
MAGR	20 Jul	Jul	Jul	10 Aug	12 Aug	11 Aug	19 Jul	24 Aug	25 Sep
MELO	----	----	----	----	----	----	----	Aug	25 Sep
OPPO	----	Aug	Aug	10 Jul	----	----	10 Aug	30 Aug	11 Sep
ORHY	----	10 Jul	25 Jul	5 Aug	18 Jul	24 Jul	19 Jul	28 Jul	10 Aug
OXLA	----	----	----	----	----	----	28 Jun	31 Jul	10 Aug

TABLE VI. (Continued):

STUDY AREA OWL DRAW									
	Seed Dissemination								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
PECL	----	10 Jul	25 Jul	5 Aug	2 Jul	24 Jul	12 Jun	3 Aug	10 Aug
PELA	----	Jul	20 Jul	15 Aug	----	----	----	26 Jul	13 Jul
PHHO	----	25 Jun	10 Jul	15 Jul	2 Jul	1 Jul	12 Jun	22 Jul	8 Jun
PHMU	----	----	----	----	----	----	----	28 Jul	15 Jun
POFE	20 Jul	10 Jul	Jul	30 Jul	2 Jul	24 Jul	12 Jun	23 Jul	13 Jul
POSE	20 Jul	10 Jul	Jul	25 Jul	2 Jul	11 Aug	12 Jun	19 Jul	28 Jun
SECA	----	----	----	12 Jul	2 Jul	11 Aug	Jun	22 Jul	----
SELA	----	Jul	25 Jul	25 Aug	2 Jul	11 Aug	----	19 Aug	----
SPCO	----	10 Jul	15 Jul	30 Jul	----	----	----	3 Aug	24 Aug
STCO	----	10 Jul	15 Jul	30 Jul	2 Jul	24 Jul	19 Jul	15 Aug	10 Aug
STVI	----	----	----	----	----	----	----	13 Aug	----
TAOF	----	----	----	----	----	----	----	16 Jul	----
TRDU	----	----	5 Jul	2 Jul	2 Jul	24 Jul	28 Jun	7 Aug	13 Jul
TRGY	----	----	----	----	2 Jul	1 Jul	----	18 Jul	15 Jun
VIAM	10 Jul	15 Jun	5 Jul	Jul	2 Jul	----	----	----	4 Jul
VINU	----	----	----	----	2 Jul	----	----	----	----
XASA	----	----	----	----	----	----	----	----	----
ZIVE	----	----	----	----	----	----	----	----	----

TABLE VI. (Continued):

STUDY AREA RED WASH

	Growth Initiation								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	----	30 Mar	Mar	Apr	20 Apr	29 Apr	Apr	Apr	Apr
AGSP	----	28 Mar	Mar	Mar	Apr	29 Apr	Apr	Apr	Apr
ALTE	----	May	----	May	Apr	22 May	----	----	Apr
ARCO	----	----	----	----	----	----	----	----	----
ARHO	----	30 Mar	----	Jun	10 May	22 May	6 May	Apr	Apr
ARHO²	----	----	----	----	----	----	----	Apr	Apr
ARNO	----	May	----	----	----	----	----	----	----
ARTR	----	May	May	May	20 May	29 Apr	Apr	Apr	Apr
ASDI	----	----	May	Apr	Apr	22 May	----	Apr	Apr
ASKE	Jun	May	----	May	Jun	22 May	May	30 Apr	Apr
ASPU	----	May	May	Apr	Apr	22 May	----	Apr	Apr
CELA	----	May	May	May	20 May	29 Apr.	----	Apr	Apr
CHDO	----	30 Mar	May	Apr	20 May	22 May	May	Apr	Apr
CHNA	----	1 Jun	Jun	May	20 May	29 Apr	Apr	1 May	Apr
CHVI	----	May	Jun	May	20 May	29 Apr	Apr	Apr	Apr
CORA	----	----	----	----	----	----	----	----	May
CRFL	----	May	May	May	Apr	22 May	----	Apr	Apr
CYMO	----	----	----	----	Apr	22 May	----	Apr	Apr
DEPI	----	May	----	----	----	----	----	----	----
ERAS	----	May	May	Apr	Apr	----	----	----	Apr
ERCE	----	----	----	----	----	----	----	----	Apr
ERBR	----	May	----	May	Apr	22 May	----	11 May	1 May
EROV	----	May	May	May	20 May	29 Apr	----	Apr	Apr
GIAG	----	----	----	Apr	----	----	----	----	----
GICO	----	----	----	----	May	Jun	Apr	----	Apr
GRSP	----	May	May	May	Apr	22 May	Apr	Apr	Apr
HAAC	----	Mar	----	Apr	20 May	----	Apr	24 Apr	Apr
LEPU	----	----	----	May	20 May	22 May	----	Apr	Apr
MACA	----	----	----	May	Aug	----	----	----	Apr
MAGR	----	----	----	----	----	----	----	Apr	May
OPPO	----	----	----	May	20 May	22 May	21 May	18 May	20 May
ORFA	----	May	----	May	15 Aug	----	----	23 Apr	Apr
ORHY	----	11 Mar	Mar	Apr	Apr	May	Apr	24 Apr	Apr
PECL	----	----	----	----	----	----	----	Apr	Apr
PELA	----	Mar	----	Apr	Apr	29 Apr	----	----	----
PHHO	----	Mar	----	Apr	Apr	29 Apr	----	Apr	Apr
POSE	----	11 Mar	Mar	Apr	20 Apr	Apr	----	Apr	Apr
SIHY	----	30 Mar	Mar	Apr	----	Apr	----	----	Apr
SILI	----	----	----	May	Apr	22 May	----	----	May
STCO	----	Mar	20 Mar	Apr	20 Mar	22 Mar	Apr	20 Apr	Apr
TECA	----	May	May	May	20 May	29 Apr	----	Apr	Apr
TOIN	----	----	----	----	----	----	----	Apr	Apr
VINU	----	----	----	----	Apr	22 May	----	----	Apr

TABLE VI. (Continued):

STUDY AREA RED WASH

Full Bloom

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	Jul	Jul	Jul	Jul	----	----	----	Jul	Jul
AGSP	Jul	Jul	Jul	15 Jun	----	----	24 Jun	30 Jun	4 Jul
ALTE	----	5 Jun	15 Jun	10 Jun	----	----	4 Jun	8 Jun	15 Jun
ARCO	----	----	25 Jun	----	----	----	----	----	----
ARHO	30 Jun	6 Jun	6 Jul	15 Jul	27 Jun	----	Jul	28 Jun	15 Jun
ARHO[2]	----	----	----	----	----	----	May	31 May	4 Jun
ARNO	----	Aug	----	----	----	----	----	----	----
ARTR	----	Aug	Aug	10 Sep	9 Sep	----	31 Aug	----	3 Oct
ASDI	----	1 Jun	Jul	15 Jun	----	Jun	21 May	30 Jun	15 Jun
ASKE	----	1 Jun	----	18 Aug	----	----	Jul	16 Jul	15 Jun
ASPU	20 Jun	7 Jun	1 Jun	30 May	5 Jun	----	Jun	24 May	4 Jun
CELA	----	5 Aug	Aug	25 Aug	----	Jun	14 Jul	21 Jul	25 Aug
CHDO	30 Jul	7 Jun	Jul	30 Jun	----	----	24 Jun	29 Jun	29 Jun
CHNA	Aug	Aug	----	30 Aug	15 Aug	28 Aug	31 Aug	20 Aug	13 Sep
CHVI	Aug	Aug	Aug	10 Aug	15 Aug	Aug	6 Aug	17 Aug	10 Aug
CORA	----	----	----	----	----	----	6 Aug	Jul	----
CRFL	30 Jun	20 Jun	26 Jun	12 Jul	15 Jul	Jun	4 Jun	28 Jun	29 Jun
CYMO	----	----	----	----	----	----	May	May	----
DEPI	Jun	----	----	----	----	----	----	----	----
ERAS	20 Jun	5 Jun	13 Jun	15 Jun	Jun	----	21 May	27 May	4 Jun
ERCE	----	----	----	----	----	----	----	17 Jul	----
ERBR	----	5 Jul	----	22 Jul	15 Aug	28 Aug	14 Jul	5 Jul	10 Aug
EROV	25 Jun	30 Jun	30 Jun	20 Jun	Jun	17 Jul	4 Jun	22 Jun	29 Jun
GIAG	25 Jun	15 Jun	----	10 Jun	----	----	----	----	----
GICO	----	----	----	----	6 Jun	Jun	15 Jul	19 Jun	15 Jun
GRSP	Jun	5 Aug	10 Jul	----	----	5 Jun	Jun	----	13 Jul
HAAC	25 Jun	5 Jun	20 Jun	10 Jun	----	----	4 Jun	14 Jun	----
LEPU	28 Jun	15 Jun	30 Jun	15 Jun	27 Jun	----	24 Jun	30 Jun	15 Jun
MACA	----	10 Aug	----	18 Aug	Sep	28 Aug	6 Aug	15 Aug	25 Aug
MAGR	----	----	----	----	----	----	----	29 Jul	25 Aug
OPPO	----	Jul	Jul	Jul	15 Jul	28 Aug	14 Jul	3 Jul	13 Jul
ORFA	----	10 Jun	----	Jun	Sept	----	----	----	----
ORHY	10 Jul	5 Jul	5 Jul	Jun	Jun	----	24 Jun	29 Jun	29 Jun
PECL	----	----	----	----	----	----	----	1 Jul	29 Jun
PELA	30 Jun	15 Jun	30 Jun	20 Jun	27 Jun	Jun	4 Jun	----	----
PHHO	----	1 Jun	5 Jun	10 Jun	----	Jun	21 May	28 May	4 Jun
POSE	Jun	25 Jun	Jun	Jun	----	Jun	----	27 Jun	29 Jun
SIHY	----	Jul	Jul	30 Jun	----	----	----	2 Jul	13 Jul
SILI	20 Jun	1 Jun	20 Jun	10 Jun	6 Jun	----	4 Jun	4 Jun	15 Jun
STCO	Jul	Jul	Jul	30 Jun	----	----	24 Jun	1 Jul	29 Jun
TECA	Aug	Jul	5 Aug	23 Jul	15 Aug	4 Aug	14 Jul	24 Jul	25 Aug
TOIN	----	----	----	----	----	----	----	26 Jun	4 Jun
VINU	----	----	----	----	----	----	----	----	----

TABLE VI. (Continued):

STUDY AREA RED WASH

	Seed Dissemination								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	Aug	5 Aug	Aug	10 Aug	----	----	----	----	5 Aug
AGSP	Aug	30 Jul	Aug	10 Sep	----	----	6 Aug	30 Aug	30 Jul
ALTE	Jul	Jul	25 Jul	10 Jul	15 Aug	4 Aug	----	5 Aug	----
ARCO	----	----	----	----	----	----	----	----	----
ARHO	Jul	20 Jun	Aug	10 Aug	15 Aug	28 Aug	6 Aug	11 Aug	20 Jul
ARHO^2	----	----	----	----	----	----	25 Jun	7 Aug	13 Jul
ARNO	----	Oct	----	----	----	----	----	----	----
ARTR	----	Oct	Oct	Nov	4 Nov	6 Nov	21 Sep		----
ASDI	----	Aug	Jul	18 Aug	----	----	----	11 Aug	----
ASKE	----	Aug	----	Oct	----	----	31 Aug	Sep	27 Jul
ASPU	Jul	20 Jun	Jul	20 Jul	27 Jun	17 Jul	24 Jun	24 Jul	13 Jul
CELA	----	----	----	Oct	4 Nov	6 Nov	Sep	----	3 Oct
CHDO	----	1 Aug	----	15 Aug	----	17 Jul	14 Jul	28 Jul	25 Aug
CHNA	----	----	----	Oct	4 Nov	6 Nov	----	----	----
CHVI	----	----	----	Oct	4 Nov	6 Nov	31 Aug	----	----
CORA	----	----	----	----	----	----	Sep	17 Sep	----
CRFL	----	5 Aug	Jul	18 Aug	15 Aug	4 Aug	14 Jul	22 Aug	15 Aig
CYMO	----	----	----	----	27 Jun	----	----	----	----
DEPI	----	Jul	----	----	----	----	----	----	----
ERAS	----	30 Jul	Jul	20 Jul	27 Jun	----	14 Jul	7 Aug	----
ERCE	----	----	----	----	----	----	----	----	----
ERBR	----	Aug	----	25 Sep	4 Nov	6 Nov	31 Aug	----	----
EROV	5 Aug	Jul	Jul	25 Aug	27 Jun	4 Aug	14 Jul	30 Aug	25 Aug
GIAG	----	15 Aug	----	15 Jul	----	----	----	----	----
GICO	----	----	----	----	27 Jun	----	6 Aug	30 Aug	25 Aug
GRSP	Jul	----	30 Jul	----	----	4 Aug	Jul	----	25 Aug
HAAC	----	Jul	Jul	1 Aug	27 Jun	----	Jul	23 Jul	----
LEPU	Jul	5 Aug	25 Jul	18 Aug	15 Aug	4 Aug	14 Jul	23 Aug	13 Jul
MACA	----	Aug	----	Oct	----	6 Nov	21 Sep	----	----
MAGR	----	----	----	----	----	----	6 Aug	20 Sep	----
OPPO	----	25 Jul	Aug	1 Sep	15 Aug	4 Aug	6 Aug	4 Sep	13 Sep
ORFA	----	30 Jun	----	5 Jul	4 Nov	----	----	----	----
ORHY	5 Aug	30 Jul	25 Jul	6 Aug	15 Jul	4 Aug	Jul	21 Aug	27 Jul
PECL	----	----	----	----	----	----	----	25 Aug	10 Aug
PELA	Aug	Aug	Aug	6 Aug	14 Aug	4 Aug	14 Jul	----	----
PHHO	Jun	20 Jun	25 Jun	20 Jul	27 Jun	17 Jul	24 Jul	14 Jul	15 Jun
POSE	Jul	Aug	Jul	18 Aug	9 Sep	17Jul	14 Jul	22 Aug	13 Jul
SIHY	----	30 Jul	30 Jul	18 Aug	----	29 Aug	14 Jul	22 Aug	10 Aug
SILI	Jul	15 Jun	Jun	18 Aug	27 Jun	----	----	28 Jul	27 Jul
STCO	Aug	Jul	Jul	20 Aug	----	4 Aug	Jul	15 Aug	27 Jul
TECA	Aug	Aug	Aug	20 Sep	4 Nov	6 Nov	Aug	----	----
TOIN	----	----	----	----	----	----	----	16 Aug	----
VINU	----	----	----	----	----	15 Aug	----	26 Jul	----

TABLE VI. (Continued):

STUDY AREA SHOSHONI 7

Growth Initiation

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	----	28 Mar	5 Apr	Apr	23 Apr	Apr	Apr	4 Apr	Apr
ALTE	----	----	May	Apr	Apr	Apr	Apr	Apr	Apr
ARHO[2]	----	----	----	----	----	----	Apr	----	Apr
ARTR	----	22 May	May	May	23 Apr	24 May	Apr	9 Apr	Apr
ASMI[2]	----	----	----	----	----	----	----	Apr	Apr
ASPU	----	5 Mar	Mar	----	----	May	Apr	Apr	Apr
BOGR	----	15 Apr	15 Apr	Apr	Mar	----	Apr	1 Apr	Apr
BRTE	----	5 Mar	Apr	May	----	----	Apr	11 Apr	Apr
CAFI	----	----	----	----	----	----	----	----	Apr
CELA	----	----	----	----	----	----	----	Apr	Apr
CHAL	----	----	----	----	----	----	May	----	----
CLLU	----	----	----	----	----	----	----	----	----
CYMO	----	----	----	----	Apr	----	Apr	Apr	Apr
DEGE	----	----	----	----	----	----	Apr	----	----
DEPI	----	----	----	May	Apr	----	May	10 Apr	Apr
ERPU	----	21 Feb	Mar	Apr	----	Apr	Apr	Apr	Apr
GIPU	----	----	----	----	----	----	----	----	----
LARE	----	----	----	----	----	----	----	Apr	Apr
LEDE	----	----	----	----	----	----	----	Apr	Apr
LUPU	----	----	----	May	----	May	----	Apr	Apr
MACA	----	----	----	----	May	----	----	----	----
OPPO	----	20 Apr	Apr	Apr	23 Apr	24 May	Apr	7 May	1 May
ORHY	----	5 Mar	5 Apr	Apr	Apr	Jun	----	9 Apr	Apr
PHHO	----	5 Mar	10 Apr	Apr	23 Apr	24 May	Apr	Apr	Apr
PLPA	----	5 Mar	Apr	----	17 May	24 May	May	May	----
POSE	----	21 Feb	30 May	Apr	Apr	----	Apr	Apr	Apr
SAIB	----	----	----	----	----	----	----	----	----
SIAL	----	----	----	----	----	24 May	----	----	----
SIHY	----	25 Mar	25 Mar	Apr	----	----	----	----	Apr
SILI	----	----	----	----	----	----	----	----	----
SPCO	----	25 Apr	Apr	Apr	17 May	Apr	Apr	Apr	Apr
STCO	----	5 Mar	Mar	Mar	23 Apr	24 May	Apr	10 Apr	Apr
VUOC	----	----	----	----	----	----	----	----	----

TABLE VI. (Continued):

STUDY AREA SHOSHONI 7

	Full Bloom								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	5 Jul	15 Jul	18 Jul	15 Jul	----	----	----	25 Jun	30 Jun
ALTE	Jun	Jun	15 Jun	May	----	----	23 May	30 May	3 Jun
ARHO[2]	----	----	----	----	----	----	May	11 May	20 May
ARTR	15 Sep	10 Oct	10 Oct	Sep	----	----	Sep	----	25 Sep
ASMI[2]	----	----	----	----	----	----	23 May	May	3 Jun
ASPU	Jun	5 Jun	20 May	----	----	9 Jun	May	7 May	20 May
BOGR	7 Agu	20 Jul	20 Jul	6 Jul	----	----	26 Jun	27 Jun	13 Jul
BRTE	----	10 Jun	30 Jun	10 Jun	8 Jun	----	----	8 Jun	20 May
CAFI	----	----	----	----	----	----	23 May	23 May	1 May
CELA	30 Jul	----	----	----	----	----	----	----	----
CHAL	----	----	----	----	----	----	26 Jun	5 Jul	----
CLLU	----	----	----	----	----	----	6 Jun	----	----
CYMO	----	----	30 May	----	17 May	----	May	23 May	1 May
DEGE	----	----	----	----	----	----	----	----	----
DEPI	----	----	----	May	May	----	----	7 Jun	20 May
ERPU	27 Jun	30 May	30 Jun	17 Jun	Jun	28 Jun	6 Jun	8 Jun	18 Jun
GIPU	----	----	----	----	----	----	----	1 Jun	----
LARE	----	----	----	----	----	----	23 May	5 Jun	25 May
LEDE	----	----	----	----	----	----	----	27 May	27 May
LUPU	----	25 Jun	15 Jun	----	----	----	6 Jun	11 Jun	23 Jun
MACA	----	25 Jun	----	----	8 Jun	----	26 Jun	21 Jun	18 Jun
OPPO	5 Jul	20 Jun	5 Jul	Jun	Jun	19 Jul	26 Jun	28 Jun	21 Jun
ORHY	Jun	10 Jun	30 Jun	Jun	Jun	----	----	11 Jun	6 Jun
PHHO	----	10 May	30 May	May	8 Jun	Jun	23 May	2 May	Apr
PLPA	1 Jul	5 Jun	25 Jun	----	Jun	Jun	6 Jun	16 Jun	3 Jun
POSE	Jun	10 Jun	10 Jun	15 Jun	----	Jun	6 Jun	6 Jun	3 Jun
SAIB	----	----	----	----	----	----	8 Aug	----	----
SIAL	----	----	----	----	----	28 Jun	----	----	----
SIHY	Jun	25 Jun	30 Jun	Jun	8 Jun	----	6 Jun	26 Jun	1 Jun
SILI	----	----	30 May	----	----	----	----	----	5 Jun
SPCO	5 Jul	20 Jun	30 Jun	----	----	----	26 Jun	----	4 Jul
STCO	Jun	5 Jul	5 Jul	Jul	----	----	26 Jun	19 Jun	29 May
VUOC	----	----	----	----	----	----	6 Jun	----	----

TABLE VI. (Continued):

STUDY AREA SHOSHONI 7

Species	Seed Dissemination 1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	Oct	30 Oct	30 Oct	1 Oct	----	19 Jul	8 Aug	----	27 Jul
ALTE	30 Jun	15 Jun	30 Jun	15 Jun	Jul	19 Jul	26 Jun	25 Jul	27 Jul
ARHO^2	----	----	----	----	----	----	26 Jun	12 Jul	13 Jul
ARTR	9 Nov	9 Nov	1 Nov	Nov	19 Nov	23 Sep	----	----	----
ASMI^2	----	----	----	----	----	----	17 Jul	8 Aug	27 Jul
ASPU	15 Jul	15 Jun	10 Jul	----	----	----	26 Jun	23 Jul	13 Jul
BOGR	9 Nov	10 Nov	Nov	Sep	----	9 Aug	8 Aug	26 Aug	24 Aug
BRTE	5 Jul	10 Jul	10 Jul	6 Jul	Jun	19 Jul	Jun	6 Aug	13 Jul
CAFI	----	----	----	----	----	----	----	30 Aug	3 Jun
CELA	Sep	----	----	----	----	----	----	----	----
CHAL	----	----	----	----	----	----	8 Aug	18 Aug	11 Sep
CLLU	----	----	----	----	----	----	26 Jun	----	----
CYMO	----	----	20 Jun	----	8 Jun	----	6 Jun	----	18 Jun
DEGE	----	----	----	----	----	----	----	----	----
DEPI	----	----	10 Jul	1 Jul	Jun	----	Jul	30 Aug	13 Jul
ERPU	15 Jul	15 Jun	20 Jul	25 Jul	Jun	19 Jul	17 Jul	27 Jul	27 Jul
GIPU	----	----	----	----	----	----	17 Jul	14 Jul	----
LARE	Jul	----	----	----	----	----	6 Jun	26 Jul	30 Jun
LEDE	5 Jul	----	20 Jul	----	----	----	23 May	21 Jul	30 Jun
LUPU	----	----	25 Jul	1 Jul	----	9 Aug	26 Jun	25 Jul	10 Aug
MACA	----	----	Jul	----	----	----	Jul	30 Jul	10 Aug
OPPO	15 Aug	----	Aug	Aug	Jun	----	8 Aug	11 Aug	11 Sep
ORHY	5 Aug	15 Jul	15 Jul	30 Jul	Jul	19 Jul	26 Jun	30 Jul	27 Jul
PHHO	25 Jun	5 Jul	5 Jul	10 Jul	Jul	----	6 Jun	16 Jul	3 Jun
PLPA	1 Aug	15 Jul	25 Jul	----	Jun	19 Jul	17 Jul	----	27 Aug
POSE	30 Jun	5 Jul	30 Jun	10 Aug	Jun	19 Jul	26 Jun	18 Aug	13 Jul
SAIB	----	----	----	----	----	----	29 Sep	----	----
SIAL	----	----	----	----	----	19 Jul	----	23 Jul	----
SIHY	5 Aug	15 Jul	5 Aug	10 Aug	Jun	9 Aug	17 Jul	30 Jul	10 Aug
SILI	----	----	5 Jul	----	----	----	----	----	----
SPCO	1 Aug	15 Jul	25 Jul	----	Jun	----	17 Jul	Aug	24 Aug
STCO	5 Aug	14 Jul	20 Jul	5 Aug	Jun	23 Sep	17 Jul	18 Aug	13 Jul
VUOC	----	----	----	----	----	----	26 Jun	----	13 Jul

TABLE VI. (Continued):

STUDY AREA SWEETWATER									
	Growth Initiation								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	----	28 Mar	Apr	Apr	15 Apr	Apr	May	15 Apr	Apr
ALTE	----	----	----	----	----	24 May	May	Apr	Apr
ARFR	----	28 Mar	5 Apr	Apr	15 Apr	24 May	May	Apr	Apr
ARHO	----	----	----	Apr	15 Apr	24 May	May	Apr	May
ARHO[2]	----	20 Apr	----	Apr	15 Apr	Apr	----	Apr	Apr
ARNO	----	22 May	20 May	May	15 Apr	24 May	5 May	Apr	Apr
ARTR	----	22 May	20 May	May	15 Apr	24 May	5 May	10 Apr	Apr
ASDR	----	1 Jun	----	----	----	----	----	----	----
ASMI[2]	----	----	----	----	15 Apr	Apr	Apr	Apr	Apr
ASPU	----	20 Mar	5 Apr	Apr	15 Apr	24 May	May	Apr	Apr
ASSI	----	----	----	----	----	----	----	----	----
ASSP	----	25 Mar	5 Apr	Apr	15 Apr	24 May	May	Apr	Apr
CAEL	----	----	----	----	15 Apr	Apr	Apr	Apr	Apr
CAFI	----	28 Mar	Apr	Apr	15 Apr	Apr	----	Apr	Apr
CANU	----	15 May	10 May	----	----	----	----	----	----
CACH	----	----	----	----	----	Apr	----	----	----
CELA	----	----	----	----	----	----	----	----	May
CHDO	----	1 Jun	----	----	----	Apr	May	Apr	Apr
CHNA	----	25 Apr	30 Apr	May	15 Apr	24 May	May	Apr	Apr
CHVI	May	20 Apr	May	May	18 May	24 May	Apr	18 Apr	Apr
COPA	----	----	----	Apr	Apr	Apr	Apr	----	Apr
CRBR	----	25 Mar	1 Mar	Apr	15 Apr	Apr	May	----	Apr
CRFL	----	----	----	----	15 Apr	Apr	May	Apr	Apr
CYMO	----	----	May	Apr	Mar	Apr	May	----	Apr
DEGE	----	25 Mar	5 Apr	Apr	18 May	----	May	----	Apr
ERCE	----	----	----	----	----	----	----	May	25 May
ERLA	----	----	May	----	----	----	----	----	----
EROV	----	20 Apr	May	May	Apr	24 May	----	Apr	Apr
ERPU	----	25 Mar	5 Apr	----	----	----	----	----	----
HAAC	----	----	----	----	----	----	----	Apr	Apr
KOCR	----	28 Mar	Apr	Apr	15 Apr	Apr	Apr	Apr	Apr
LARE	----	----	----	----	----	----	----	May	----
LELU	----	----	----	----	----	----	----	----	Apr
LEPU	----	20 May	May	Apr	15 Apr	Apr	Apr	18 Apr	Apr
LIRU	----	----	----	----	----	----	----	----	----
MACA	----	----	----	----	----	----	----	Apr	Apr
MAGR	----	----	----	May	May	----	----	May	May
OECA	----	----	----	----	----	----	----	----	----
OEAL	----	----	----	----	----	----	----	----	Apr
OPPO	----	25 Apr	May	Apr	15 Apr	24 May	May	6 May	Apr
ORFA	----	----	----	----	----	----	----	----	----
ORHY	----	28 Mar	Apr	Mar	15 Apr	24 May	May	19 Apr	Apr
OXLA	----	20 Mar	30 Mar	----	----	----	----	----	Apr
PECL	----	May	----	Apr	15 Apr	Apr	May	Apr	Apr
PHHO	----	----	----	Apr	15 Apr	24 May	May	Apr	Apr

TABLE VI. (Continued):

STUDY AREA SWEETWATER

Species	Growth Initiation 1973	1974	1975	1976	1977	1978	1979	1980	1981
POSE	----	25 Mar	Apr	----	----	----	Apr	Apr	Apr
PSTE	----	20 May	----	May	18 May	Jun	May	May	Apr
SADE	----	----	----	----	----	7 Jun	----	----	----
SPCO	----	28 Mar	5 Apr	Apr	18 May	Apr	May	Apr	May
STCO	----	28 Mar	Apr	Mar	15 Apr	Apr	Apr	Apr	Apr
TECA	----	28 Mar	5 Apr	Apr	18 May	24 May	Apr	Apr	Apr
TOIN	----	----	May	Apr	Mar	----	----	Apr	Apr
VINU	----	5 May	----	----	Apr	24 May	Apr	----	Apr
ZYVE	----	28 Mar	5 Apr	Apr	15 Apr	Apr	Apr	Apr	Apr

TABLE VI. (Continued):

STUDY AREA SWEETWATER

Full Bloom

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	12 Jul	10 Jul	5 Jul	----	----	----	----	2 Jul	----
ALTE	----	----	15 Jun	----	----	----	6 Jun	8 Jun	17 Jun
ARFR	5 Sep	Aug	Aur	25 Aut	----	22 Sep	2 Sep	25 Aug	12 Sep
ARHO	----	20 Jun	20 Jun	5 Jul	Jun	Jun	6 Jun	18 Jun	25 May
ARHO^2	----	25 May	30 May	25 May	----	----	23 May	May	17 Jun
ARNO	15 Sep	20 Sep	20 Sep	15 Sep	----	22 Sep	2 Sep	7 Sep	4 Oct
ARTR	15 Sep	15 Sep	20 Sep	19 Sep	----	22 Sep	2 Sep	6 Sep	4 Oct
ASDR	----	20 Jul	Jul	----	----	----	----	----	----
ASMI^2	----	----	----	----	----	----	26 Jun	15 Jun	9 Jun
ASPU	1 Jul	5 Jun	15 Jun	2 Jun	----	----	----	12 May	9 Jun
ASSI	----	----	----	----	----	----	----	15 Jun	----
ASSP	1 Jul	19 Jun	30 Jun	15 Jun	Jun	Jun	6 Jun	19 Jun	9 Jun
CAEL	----	----	----	----	----	----	Jun	18 May	9 Jun
CAFI	----	30 May	15 Jun	12 Jun	12 Jun	----	23 May	18 May	25 Jun
CANU	20 Jun	19 Jun	Jun	----	----	----	----	----	----
CACH	----	----	----	----	----	----	----	----	----
CELA	----	----	----	----	----	1 Sep	----	----	12 Sep
CHDO	----	20 Jun	20 Jun	----	----	----	26 Jun	19 Jun	13 Jul
CHNA	Sep	Sep	Sep	19 Sep	Aug	19 Jul	2 Sep	7 Sep	12 Sep
CHVI	10 Sep	10 Aug	Aug	15 Sep	Aug	22 Sep	2 Sep	17 Aug	29 Jul
COPA	29 Jun	5 Jun	20 Jun	10 Jun	8 Jun	7 Jun	6 Jun	18 Jun	9 Jun
CRBR	29 Jun	22 May	30 Jun	1 Jul	8 Jun	7 Jun	23 May	5 Jun	17 Jun
CRFL	----	----	----	----	Jun	30 Jun	6 Jun	3 Jun	1 Jul
CYMO	----	----	5 Jun	17 May	----	----	23 May	May	May
DEGE	20 Jun	25 Jun	15 Jun	May	8 Jun	----	----	23 Jun	17 Jun
ERCE	----	----	----	----	----	----	16 Jul	16 Jul	29 Jul
ERLA	----	----	15 Jun	----	----	----	----	----	----
EROV	20 Jun	25 May	15 Jun	15 Jun	Jun	7 Jun	23 May	10 Jun	17 Jun
ERPU	29 Jun	15 Jun	Jun	----	----	----	6 Jun	17 Jun	17 Jun
HAAC	----	----	----	----	----	----	----	12 Jun	25 May
KOCR	25 Jun	20 Jun	20 Jun	20 Jun	----	30 Jun	6 Jun	18 Jun	17 Jun
LARE	----	----	----	----	----	----	23 Jun	4 Jun	----
LELU	----	1 Jun	24 Jun	----	----	30 Jun	6 Jun	----	25 May
LEPU	30 Jun	19 Jun	30 Jun	5 Jul	29 Jun	----	26 Jun	21 Jun	17 Jun
LIRU	----	----	----	----	----	----	----	22 Jun	----
MACA	----	----	----	----	----	----	8 Aug	3 Aug	12 Aug
MAGR	----	----	Jul	20 Aug	----	----	26 Jun	20 Jun	15 Jul
OECA	----	----	20 Jun	----	----	----	----	----	9 Jun
OEAL	----	----	----	----	----	----	6 Jun	Jun	17 Jun
OPPO	15 Jul	5 Jul	10 Jul	30 Jul	29 Jun	----	26 Jun	6 Jul	1 Jul
ORFA	----	20 Jun	Jul	----	----	----	----	25 Jun	1 Jul
ORHY	20 Jun	20 Jun	30 Jun	Jun	----	Jun	26 Jun	19 Jun	1 Jul
OXLA	----	10 Jun	25 Jun	----	----	----	----	----	1 Jul
PECL	30 Jun	20 Jun	25 Jun	Jun	Jun	Jun	6 Jun	17 Jun	9 Jun
PHHO	30 Jun	22 May	30 May	May	Jun	----	23 May	19 May	25 May
POSE	15 Jun	20 Jun	----	----	----	----	6 Jun	17 Jun	17 Jun

TABLE VI. (Continued):

STUDY AREA SWEETWATER

				Full Bloom					
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
PSTE	----	----	----	Jul	----	----	26 Jun	18 Jun	29 Jul
SADE	----	----	----	----	----	----	----	----	----
SPCO	----	25 Jun	30 Jun	Jul	----	----	----	23 Jun	----
STCO	25 Jun	25 Jun	30 Jun	25 Jun	----	7 Aug	26 Jun	24 Jun	1 Jul
TECA	1 Aug	1 Aug	1 Aug	5 Aug	19 Jul	7 Aug	16 Jul	22 Jul	12 Aug
TOIN	----	10 Jun	15 Jun	10 Sep	----	----	----	Jun	9 Jun
VINU	----	25 May	1 Jun	----	8 Jun	----	----	19 May	21 May
ZYVE	----	30 May	5 Jun	May	----	----	23 May	30 May	25 May

TABLE VI. (Continued):

STUDY AREA SWEETWATER

	Seed Dissemination								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	15 Sep	15 Sep	30 Jul	----	----	----	8 Aug	23 Aug	12 Aug
ALTE	----	----	25 Jul	----	----	19 Jul	26 Jun	16 Jul	15 Jul
ARFR	Nov	Oct	Oct	Oct	----	----	----	----	----
ARHO	----	25 Jul	----	1 Aug	19 Jul	19 Jul	16 Jul	24 Jul	15 Jul
ARHO[2]	----	30 Jun	----	25 Jun	8 Jun	19 Jul	Jul	9 Jul	15 Jul
ARNO	5 Nov	25 Oct	25 Oct	Nov	----	----	----	----	----
ARTR	10 Nov	30 Oct	25 Oct	Nov	----	----	----	----	----
ASDR	----	Aug	Aug	----	----	----	----	----	----
ASMI	----	----	----	----	----	19 Jul	16 Jul	15 Jul	15 Jul
ASPU	12 Jul	10 Jun	Jun	15 Jul	29 Jun	----	26 Jun	Jul	29 Jul
ASSI	----	----	----	----	----	----	----	30 Jul	----
ASSP	Aug	25 Jul	25 Jul	25 Aug	19 Jul	1 Sep	26 Jun	19 Aug	29 Jul
CAEL	----	----	----	----	8 Jun	7 Aug	26 Jun	30 Jul	1 Jul
CAFI	20 Aug	5 Aug	5 Jul	19 Sep	8 Jun	----	26 Jun	30 Jul	15 Jul
CANU	5 Jul	5 Jul	----	----	----	----	----	----	----
CACH	----	----	----	----	----	19 Jul	----	----	----
CELA	----	----	----	----	----	----	----	----	----
CHDO	----	10 Jul	25 Jul	----	----	7 Aug	----	25 Jul	24 Jul
CHNA	Oct	Oct	Oct	Nov	----	----	----	----	----
CHVI	30 Oct	----	Oct	Nov	----	----	27 Sep	----	4 Oct
COPA	Jul	20 Jul	20 Jul	10 Aug	19 Jul	19 Jul	----	24 Jul	29 Jul
CRBR	10 Aug	Aug	25 Jul	20 Aug	29 Jun	19 Jul	26 Jun	30 Jul	15 Jul
CRFL	----	----	----	----	19 Jul	7 Aug	Jul	3 Jul	15 Jul
CYMO	----	----	20 Jun	15 Jun	8 Jun	19 Jul	6 Jun	29 Jun	9 Jun
DEGE	12 Jul	30 Jun	15 Jul	20 Jul	29 Jun	----	26 Jun	21 Jul	29 Jul
ERCE	----	----	----	----	----	----	2 Sep	26 Sep	12 Sep
ERLA	----	----	----	----	----	----	----	----	----
EROV	5 Jul	10 Jul	10 Jul	Aug	29 Jun	19 Jul	16 Jul	24 Jul	29 Jul
ERPU	5 Jul	5 Jul	10 Jul	----	----	----	----	27 Jul	29 Jul
HAAC	----	----	----	----	----	----	26 Jun	1 Jul	1 Jul
KOCR	24 Aug	15 Jul	15 Jul	10 Aug	29 Jun	19 Jul	16 Jul	30 Jul	15 Jul
LARE	----	----	----	----	----	----	----	13 Jul	----
LELU	----	29 Jul	25 Jul	----	----	19 Jul	16 Jul	14 Aug	29 Jul
LEPU	Jul	1 Aug	20 Jul	10 Aug	19 Jul	7 Aug	16 Jul	27 Jul	15 Jul
LIRU	----	----	----	----	----	----	----	----	12 Aug
MACA	----	----	----	----	----	----	----	----	----
MAGR	----	----	Aug	Sep	19 Jul	7 Aug	8 Aug	29 Jul	----
OECA	----	----	Jul	----	----	----	----	----	1 Jul
OEAL	----	----	----	----	----	----	----	----	29 Jul
OPPO	Sep	Aug	----	Sep	18 Sep	1 Sep	8 Aug	8 Sep	12 Sep
ORFA	----	15 Jul	----	----	----	----	8 Aug	28 Jul	12 Aug
ORHY	5 Sep	10 Jul	10 Jul	15 Jul	19 Jul	19 Jul	Jul	15 Jul	15 Jul
OXLA	Aug	Aug	25 Jul	----	----	----	----	----	24 Aug
PECL	20 Jul	10 Jul	5 Aug	30 Jul	29 Jun	7 Aug	16 Jul	21 Aug	15 Jul
PHHO	12 Jul	5 Jul	Jul	2 Jun	29 Jun	1 Sep	6 Jun	2 Jul	1 Jul

TABLE VI. (Continued):

STUDY AREA SWEETWATER

Species	Seed Dissemination								
	1973	1974	1975	1976	1977	1978	1979	1980	1981
POSE	5 Jul	5 Jul	----	----	----	1 Sep	Jul	10 Jul	15 Jul
PSTE	----	Aug	----	Aug	----	1 Sep	16 Jul	30 Aug	----
SADE	----	----	----	----	----	----	----	----	----
SPCO	Aug	5 Jul	----	Aug	----	----	16 Jul	24 Jul	15 Jul
STCO	5 Sep	10 Jul	10 Jul	1 Aug	19 Jul	19 Jul	16 Jul	15 Jul	15 Jul
TECA	Oct	15 Oct	15 Oct	19 Sep	----	----	2 Sep	16 Sep	12 Sep
TOIN	----	10 Jul	Aug	Oct	----	----	----	----	----
VINU	----	10 Jul	Aug	Oct	29 Jun	----	26 Jun	----	9 Jun
ZYVE	----	5 Jul	30 Jun	25 Jun	29 Jun	----	6 Jun	12 Jul	1 Jul

TABLE VI. (Continued):

STUDY AREA UPPER GOVERNMENT

	Growth Initiation								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	----	Mar	Mar	Apr	Mar	Apr	Apr	Apr	Apr
ALTE	----	----	----	Apr	Mar	24 May	Apr	Apr	Apr
ANDI	----	----	----	----	Apr	24 May	May	Apr	Apr
ARHO[2]	----	----	----	----	----	----	May	Apr	Apr
ARLI	----	----	May	May	Apr	24 May	----	----	----
ARTR	----	May	May	May	23 Apr	24 May	May	18 Apr	Apr
ASDR	----	----	----	----	----	----	----	----	----
ASPU	----	----	May	Apr	23 Apr	May	May	Apr	Apr
BOGR	----	----	----	----	----	Apr	May	Apr	Apr
BRTE	----	----	Jun	Apr	----	----	----	----	----
CANU	----	----	----	----	----	----	----	----	Apr
CACH	----	----	----	May	23 Apr	Apr	May	Apr	Apr
CELA	----	----	May	----	----	----	----	----	----
CHVI	----	May	May	May	23 Apr	Apr	May	Apr	Apr
CRMO	----	----	----	Apr	23 Apr	Apr	May	Apr	Apr
CYMO	----	----	May	Apr	23 Apr	----	----	Apr	Apr
DEPI	----	----	May	May	----	24 May	May	May	May
ERPU	----	----	Jun	May	23 Apr	24 May	----	Apr	Apr
HAAC	----	----	----	----	----	----	----	Apr	Apr
KOCR	----	Mar	Mar	Apr	----	Apr	May	Apr	Apr
LARE	----	----	Jun	Apr	----	24 May	----	----	May
LEDE	----	----	Jun	----	----	----	----	----	----
LEAL	----	----	----	----	----	----	----	Apr	----
LERE	----	----	Jun	----	23 Apr	24 May	----	Apr	Apr
LOFO	----	----	----	----	----	----	----	Apr	----
MACA	----	----	----	----	Apr	----	----	Apr	Apr
MAGL	----	----	May	----	----	----	----	----	----
OPPO	----	May	May	May	23 Apr	24 May	5 May	13 May	1 May
PECL	----	----	Jun	May	May	24 May	May	Apr	Apr
PHHO	----	----	Apr	Apr	23 Apr	24 May	----	Apr	Apr
PLPA	----	----	Jun	----	----	----	----	----	----
POSE	----	Mar	Mar	Apr	Mar	Apr	May	Apr	Apr
SIHY	----	Mar	----	----	----	----	----	----	----
SPCO	----	May	May	Apr	23 Apr	24 May	May	26 Apr	Apr
STCO	----	----	----	----	23 Apr	Apr	May	Apr	Apr
TRDU	----	----	----	----	Apr	----	----	13 May	Apr
VIAM	----	----	Jun	May	Apr	Apr	May	Apr	Apr
VINU	----	----	May	May	23 Apr	24 May	May	----	Apr
XASA	----	----	----	----	----	----	May	Apr	Apr

TABLE VI. (Continued):

STUDY AREA UPPER GOVERNMENT

	Full Bloom								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	10 Jul	Jul	10 Jul	Jul	----	----	26 Jun	----	30 Jun
ALTE	Jun	Jun	20 Jun	10 Jun	----	----	6 Jun	5 Jun	9 Jun
ANDI	----	----	----	----	----	----	6 Jun	6 Jun	9 Jun
ARHO[2]	----	----	----	----	----	----	23 May	15 May	9 Jun
ARLI	----	----	30 May	5 Jun	----	----	----	----	----
ARTR	Aug	22 Aug	Aug	18 Sep	Sep	----	Sep	5 Sep	----
ASDR	----	----	----	----	----	----	----	13 Jun	----
ASPU	----	----	May	1 Jun	17 May	----	23 May	25 May	----
BOGR	----	----	----	----	----	----	16 Jul	----	25 May
BRTE	----	----	30 Jun	Jun	----	----	----	25 Jun	----
CANU	----	----	----	----	----	----	26 Jun	29 Jul	17 Jun
CACH	5 Jul	10 Jun	5 Jun	20 Jun	8 Jun	Jun	Jun	9 Jun	17 Jun
CELA	10 Jul	----	----	----	----	----	----	----	9 Jun
CHVI	15 Aug	22 Aug	Aug	20 Sep	10 Aug	Jun	1 Sep	21 Aug	----
CRMO	----	10 Jun	10 Jun	10 Jun	8 Jun	Jun	6 Jun	4 Jun	17 Jun
CYMO	----	----	Jun	May	18 May	----	5 May	May	25 May
DEPI	----	----	15 Jun	Jun	----	----	6 Jun	----	----
ERPU	----	----	25 Jun	15 Jul	Jun	19 Jul	6 Jun	4 Jul	17 Jun
HAAC	----	----	----	----	----	----	----	24 May	9 Jun
KOCR	Jul	20 Jun	30 Jun	30 Jun	8 Jun	26 Jun	6 Jun	12 Jun	17 Jun
LARE	----	----	24 Jun	15 Jun	----	----	6 Jun	23 Jun	25 May
LEDE	----	----	Jun	----	----	----	----	----	----
LEAL	----	----	----	----	----	----	----	----	----
LERE	----	----	25 Jun	----	Jun	----	26 Jun	25 Jun	17 Jun
LOFO	----	----	May	----	----	---	23 May	9 May	25 May
MACA	----	----	----	----	28 Jun	26 Jun	26 Jun	26 Jun	30 Jun
MAGL	----	----	30 Jun	----	----	----	----	----	----
OPPO	5 Jul	Jul	Jul	25 Jun	28 Jun	19 Jul	26 Jun	23 Jun	30 Jun
PECL	----	20 Jun	24 Jun	Jun	----	----	6 Jun	13 Jun	17 Jun
PHHO	Jun	5 Jun	1 Jun	May	10 May	Jun	23 May	11 May	25 May
PLPA	----	----	Jul	----	----	Jun	Jun	----	30 Jun
POSE	----	10 Jun	30 Jun	20 Jun	8 Jun	----	6 Jun	----	17 Jun
SIHY	----	Jul	----	----	----	----	----	----	----
SPCO	30 Jun	15 Jun	Jun	Jun	----	----	26 Jun	26 Jun	13 Jul
STCO	----	----	----	----	----	----	Jun	2 Jul	17 Jun
TRDU	----	----	----	----	----	----	26 Jun	13 Jun	17 Jun
VIAM	----	----	25 Jun	----	----	Jun	Jun	4 Jun	9 Jun
VINU	----	----	Jun	May	May	----	23 May	20 May	25 May
XASA	----	----	----	----	----	----	1 Sep	21 Aug	11 Sep

TABLE VI. (Continued):

STUDY AREA UPPER GOVERNMENT

Species	Seed Dissemination								
	1973	1974	1975	1976	1977	1978	1979	1980	1981
AGSM	Aug	25 Aug	Aug	Aug	10 Aug	9 Aug	8 Aug	30 Aug	24 Aug
ALTE	Jun	1 Jun	Jul	24 Jul	28 Jun	9 Aug	16 Jul	6 Aug	31 Jul
ANDI	----	----	----	----	8 Jun	----	26 Jun	27 Jul	----
ARHO[2]	----	----	----	----	----	----	26 Jun	14 Jul	----
ARLI	----	----	Jun	10 Jul	8 Jun	19 Jul	----	11 Aug	----
ARTR	Nov	Nov	Nov	Nov	----	23 Sep	----	----	----
ASDR	----	----	----	----	----	----	8 Aug	14 Aug	----
ASPU	----	----	Jun	5 Jul	28 Jun	9 Aug	16 Jul	27 Jul	30 Jun
BOGR	----	----	----	----	----	----	----	----	13 Jul
BRTE	----	----	25 Jul	25 Jul	19 Jul	19 Jul	16 Jul	12 Aug	10 Aug
CANU	----	----	----	----	----	----	16 Jul	29 Jul	31 Jul
CACH	25 Jul	Jul	25 Jul	25 Jul	18 Jun	19 Jul	16 Jul	14 Aug	----
CELA	Aug	----	----	----	----	----	----	----	----
CHVI	----	Sep	Sep	Oct	----	19 Jul	----	----	----
CRMO	20 Jul	15 Jun	20 Jul	5 Jul	28 Jun	19 Jul	16 Jul	1 Aug	30 Jun
CYMO	----	----	24 Jun	5 Jun	8 Jun	----	26 Jun	Jul	17 Jun
DEPI	----	----	20 Jul	5 Aug	----	----	16 Jul	----	30 Jun
ERPU	Jul	19 Jul	25 Jul	5 Aug	19 Jul	9 Aug	16 Jul	30 Aug	13 Jul
HAAC	----	----	----	----	----	----	26 Jun	30 Jul	13 Jul
KOCR	25 Jul	Jul	30 Jul	10 Aug	19 Jul	19 Jul	16 Jul	19 Aug	13 Jul
LARE	----	----	Jul	10 Aug	----	----	26 Jun	15 Jul	30 Jun
LEDE	----	----	1 Aug	----	----	----	----	----	----
LEAL	----	----	----	----	----	----	Jul	----	----
LERE	----	----	Jul	----	19 Jul	----	16 Jul	16 Jul	30 Jun
LOFO	17 Jul	----	Jun	----	----	----	----	26 Jul	30 Jun
MACA	----	----	----	----	10 Aug	9 Aug	16 Jun	23 Aug	10 Aug
MAGL	----	----	25 Jul	----	----	----	----	----	----
OPPO	30 Aug	Aug	Aug	Aug	10 Aug	23 Sep	8 Aug	3 Sep	24 Aug
PECL	----	Jul	Aug	1 Jul	10 Aug	----	Jul	8 Aug	13 Jul
PHHO	Jul	Jul	Jul	1 Jul	8 Jun	19 Jul	26 Jun	26 Jul	30 Jun
PLPA	----	----	30 Jul	----	----	19 Jul	Aug	----	31 Jul
POSE	Jul	Jul	Jul	10 Aug	28 Jun	19 Jul	16 Jul	14 Aug	13 Jul
SIHY	25 Jul	20 Aug	----	----	----	----	----	----	----
SPCO	Aug	20 Aug	5 Aug	15 Aug	10 Aug	1 Sep	16 Jul	11 Aug	31 Jul
STCO	----	----	----	----	19 Jul	19 Jul	Jul	30 Aug	31 Jul
TRDU	----	----	----	----	28 Jun	19 Jul	Jul	2 Jul	10 Aug
VIAM	Jul	Jul	Jul	----	28 Jun	9 Aug	26 Jun	9 Aug	13 Jul
VINU	----	----	Jul	Jun	28 Jun	----	Jun	29 Jun	17 Jun
XASA	----	----	----	----	----	----	29 Sep	----	----

SECTION II

Multiple Linear Regression for Predictive Modeling

1981

Introduction

A multiple linear regression model was used to analyze vegetative and reproductive phenology data. The purpose of the analysis was to identify causal relationships between environmental factors and phenodynamics and to to able to predict future interactions from which forecasts of phenology and herbage production could be derived. Two grass species, *Agropyron smithii* and *A. spicatum*, and two shrub species, *Artemisia nova* and *A. tridentata*, were analyzed.

The Hocking-LaMotte-Leslie method of multiple regression analysis was implemented for the current report. This method is a backward selection process as opposed to the previously used forward selection process. A backward selection process was deemed superior to the forward selection process for this data set.

In the forward selection models the most significant variable is entered into the model first. Partial correlation coefficients are then calculated and the next most significant variable is entered, given that the first variable is already in the model. Partial correlations are then recalculated and the process continues. This procedure poses a problem because it does not account for interaction between two independent variables. In other words, two independent variables may not be significant when analyzed separately against a dependent variable; however, when analyzed together, as a unit they may then become more significant than either was individually; and possibly one or both may become more significant than any other single variable in

the model. Thus unacceptable deviation from the optimum model may occur.

The backward selection process eliminates this problem by starting with the full model of independent variables and deleting the sequentially least significant variables. The problems associated with forward selection are then eliminated. The backward selection process begins by entering all of the independent variables into a selection pool. Any size subset of variables from the selection pool can then be specified and the optimum regressions for those subsets calculated. The equations for each subset selected are then used to determine the optimum regression, based on the minimum mean square error. Partial correlation coefficients for the full model and each specified subset are calculated for tests of significance.

A simple t-test is calculated to determine significant variables. The least significant are eliminated from the regression to establish the desired subset size. An analysis of variance is then conducted and the model is tested for significance. Variables with partial correlation coefficients are included in the model until the optimum mean square error is determined. A multiple correlation coefficient is then computed and compared to the coefficient for other regressions. An evaluation of the t-value for regression coefficients, the F-value for the regression, and the multiple regression coefficient will yield the optimum predictive model. These models are necessary to forecast future phenological development rates and, of great importance, to supply quantitative data of interactive relationships.

The regression model is expressed in terms of independent variables and their effect on a dependent or response variable. The model takes the form:

$$Y = B_o + B_1X_{i1} + B_2X_{i2} \quad B_3X_{i3} + \ldots \; B_nX_{in} + e_i$$

The Y is the response variable that is defined by the right side of the equation. In this report the response variables are the vegetative and reproductive phenological stages. The B_o is the Y-axis intercept of the optimum regression and is of little interpretive value in an ecological sense.

The coefficients B_n demonstrate the positive or negative dependence and the magnitude of that relationship to Y according to the influence of the other independent variables. A positive coefficient denotes a variable that promotes rate of plant development. Conversely, negative coefficients indicate variables which protract the plant development time.

Accellerated plant development rates are expressed by environmental conditions such as rapidly increasing and sustained high summer temperatures, limited precipitation, and rapid soil moisture depletion; a condition common to soils with high sand content and low waterholding capacity. Prolonged phenological development is exhibited as a response to cool summer temperatures, abundant precipitation, and long lasting soil moisture associated with abundant precipitation and high waterholding capacity of soils.

Greatest production of herbage is usually, but not always, associated with environmental factors identified by negative coefficients that prolong or delay phenological development. Extremes such as excessively cool and moist spring periods or an exceptionally early warm and dry spring can inhibit or modify plant or phenological development rates to such a degree that subsequent herbage production may be restricted as a result. The complexity of biological interactive responses to time and changing environmental stresses requires comprehensive data accumulation and analysis, as well as subjective judgement for definition of predictive models to accurately forecast future events.

The X_i variables are the environmental and biotic factors listed in Table I. An estimate of the Y response variable can be obtained by summation of the multiplicative $B_n X_{in}$ components. The adjusted multiple correlation coefficient and the standard error of the regression will determine the accuracy of the estimate.

The analyses for vegetative and reproductive phenodynamics for each of the four species are listed in following sections.

TABLE I. Independent and dependent variables used in multiple regression analysis.

Variable No.	
1	Soil temperature at 38 cm depth on the sampling date (°C) (15")
2	Soil moisture % at 0-15 cm depth on the sampling date (0-6")
3	Soil moisture % at 15-30 cm depth on the sampling date (6-12")
4	Soil moisture % at 46-61 cm depth on the sampling date (18-24")
5	Soil moisture % at 0-15 cm depth on the previous sampling date
6	Soil moisture % at 15-30 cm depth on the previous sampling date
7	Soil moisture % at 46-61 cm depth on the previous sampling date
8	Oct. 15-April 15 precipitation accumulation (mm)
9	April 15-July 1 precipitation accumulation (mm)
10	July 1-Sept. 1 precipitation accumulation (mm)
11	Sept. 1-Oct. 15 precipitation accumulation (mm)
12	Ambient air temperature on sampling date (°C)
13	Maximum air temperature since the previous sampling date (°C)
14	Minimum air temperature since the previous sampling date (°C)
15	Reproductive phenophase value
16	Vegetative phenophase value

Metric-English equivalency values

1 mm = .04"

15 cm = 6"

30 cm = 12"

38 cm = 15"

46 cm = 18"

61 cm = 24"

(1.8)(°C) + 32 = °F

ANALYSES FOR AGROPYRON SMITHII

Reproductive Phenology. Seven independent environmental variables were chosen from the selection pool of fourteen variables. The variables chosen and their significance levels are listed in Table II. The regression model calculated for this subset of variables is:

$$Y_{15} = 9.391 + .168X_2 - .274X_6 - .229X_7 + 1.277X_{10} - 2.273X_{11} + .0849X_{12} + .207X_{13}$$

where Y_{15} = reproductive phenology.

This regression model was highly significant when tested by analysis of variance procedures. The F statistic was calculated to be 8.31 ($P \leq .001$). The independent variables accounted for 47.73 percent of the variability of the reproductive phenology. This value is an adjusted multiple correlation coefficient for the number of variables present in the model. The majority of reproductive phenological scores for western wheatgrass were obtained from the overall phenology observations. This was due to the lack of reproductive culms encountered along the phenology transects. By addition of the overall phenology values the sample size for reproductive phenology was increased sufficiently to achieve an adequate level resulting in significant correlations of reproductive phenology with some of the environmental variables.

The variables which promoted phenological development were: Soil moisture percent at 0-15 cm depth on the sampling date (X_2), Summer precipitation X_{10}, Maximum air temperature since the previous sampling date (X_{13}), Ambient air temperature on the sampling date (X_{12}). Reproductive development was prolonged by: Soil moisture percent at 15-30 cm depth on the previous sampling date (X_6), Soil moisture

TABLE II. Description and significances of independent variables used in the analysis of reproductive phenology of Agropyron smithii.

Variable	Description	T-value	Significance
2	soil moisture % at 0-15 cm depth on the sampling date	1.76	.084
6	soil moisture % at 15-30 cm depth on the previous sampling date	-2.47	.017
7	soil moisture % at 46-61 cm depth on the previous sampling date	-1.24	.221
10	July 1-Sept. 1 precipitation accumulation (mm)	1.88	.066
11	Sept. 1-Oct. 15 precipitation accumulation (mm)	-3.01	.004
13	maximum air temperature since the previous sampling date (°C)	3.21	.002
12	ambient air temperature on sampling date (°C)	2.38	.021

percent at 46-61 cm depth on the previous sampling date (X_7), Fall precipitation (X_{11}).

Vegetative Phenology. Seven independent environmental variables were selected from a possible fourteen variables to supply the best regression model. The variables chosen and their significance levels are listed in Table III. The regression model calculated is listed below:

$$Y_{16} = 4.098 - .0411X_2 - .006X_4 - .048X_6 + .151X_8$$
$$+ .109X_9 + .043X_{13} + .016X_{12}$$

where Y_{16} = vegetative phenology.

The regression model was highly significant when tested by analysis of variance procedures. The F statistic was calculated as 18.21 ($P \leq .001$). The independent variables present in the model accounted for

57.5 percent of the vegetative phenology variability.

Four variables promoted the vegetative phenologic development. They were: Winter precipitation (X_8), Spring precipitation (X_9), Maximum air temperature since the previous sampling date (X_{13}), Ambient air temperature on sampling date (X_{12}). Three factors prolonged the vegetative development. They were: Soil moisture percent at 0-15 cm depth on the sampling date (X_2), Soil moisture percent at 46-61 cm depth on the sampling date (X_4), Soil moisture percent at 15-30 cm depth on the previous sampling date (X_6).

Table III. Description and significances of independent variables used in the analysis of vegetative phenology of *Agropyron smithii*.

Variable	Description	T-value	Significance
2	Soil moisture % at 0-15 cm depth on the sampling date	-3.17	.002
4	Soil moisture % at 46-61 cm depth on the sampling date	-1.35	.180
6	Soil moisture % at 15-30 cm depth on the previous sampling date	-3.57	.001
8	October 15 - April 15 precipitation accumulation (cm)	1.62	.109
9	April 15-July 1 precipitation accumulation (cm)	1.99	.050
12	Ambient air temperature on the sampling date (°C)	2.56	.012
13	Maximum air temperature since the previous sampling date (°C)	3.81	.000

ANALYSES FOR AGROPYRON SPICATUM

Reproductive Phenology. Seven independent environmental variables were chosen from the selection pool of fourteen variables. The variables chosen and their significance levels are listed in Table IV. The regression model calculated for this subset of variables is:

$$Y_{15} = 5.899 + .472X_1 - .321X_2 - .513X_7 + 1.620X_9 + 2.225X_{11} - .197X_{12} + .283X_{14}$$

where Y_{15} = reproductive phenology.

This regression model was highly significant when tested by analysis of variance procedures. The F statistic for regression was 7.05 and the probability associated with the F statistic was less than .001. The seven independent variables accounted for 49.06 percent of the variability of the reproductive phenology. This value represents an adjusted multiple correlation coefficient that has accounted for the number of variables present in the model.

Variables which promoted phenologic development were: Soil temperature at 38 cm depth on the sampling date X_1, April 15-July 1 precipitation accumulation (X_9), Sept. 1-Oct.15 precipitation accumulation (X_{11}), Minimum air temperature since the previous sampling date (X_{14}). The other variables prolonged or slowed the plant phenological development. They were: Soil moisture % at 0.15 cm depth on the sampling date (X_2), Soil moisture % at 46-61 cm depth on the previous sampling date (X_7), Ambient air temperature on the sampling date (X_{12}).

Vegetative Phenology. Ten independent environmental variables were selected from the possible variables to form the best regression model. The variables chosen and their significance levels are listed in Table V.

Table IV. Description and significances of independent variables used in the analysis of reproductive phenology of *Agropyron spicatum*.

Variable	Description	T-value	Significance
1	Soil moisture % at 38 cm depth on the sampling date (°C)	2.00	.052
2	Soil moisture % at 0-15 cm depth on the sampling date	-1.49	.144
7	Soil moisture % at 46-61 cm depth on the previous sampling date	-2.45	0.19
9	April 15-July 1 precipitation accumulation (cm)	2.23	.032
11	Sept. 1-Oct. 15 precipitation accumulation (cm)	1.27	.211
12	Ambient air temperature on sampling date (°C)	-3.06	.004
14	Minimum air temperature since the previous sampling date (°C)	1.93	.061

The regression model calculated is listed below:

$$Y_{16} = 6.652 + .019X_1 - .066X_3 + .029X_5 - .088X_6 - .027X_7$$

$$- .234X_8 + .179X_9 + .084X_{10} + .012X_{12} + .016X_{14}.$$

where Y_{16} = vegetative phenology.

The regression model was highly significant when tested by analysis of variance. The F- statistic for regression was calculated as 12.63 ($P \leq .001$). The independent variables present in the regression model accounted for 72.55 percent of the variability of the vegetative phenology. The adjusted multiple correlation coefficient was used to determine the best regression model.

Six factors promoted plant vegetative phenologic development: Soil temperature at 38 cm depth (X_1), Soil moisture % at 0-15 cm depth on the previous sampling date (X_5), Spring precipitation (X_9), Summer

Table V. Descriptions and significances of independent variables used in the analysis of vegetative phenology of *Agropyron spicatum*.

Variable	Description	T-value	Significance
1	Soil temperature at 38 cm depth on the sampling date (°C)	1.00	.323
3	Soil moisture % at 15-30 cm depth on the sampling date	-2.92	.006
5	Soil moisture % at 0-15 cm depth on the previous sampling date	1.36	.182
6	Soil moisture % at 15-30 cm depth on the previous sampling date	-2.87	.007
7	Soil moisture % at 46-61 cm depth on the previous sampling date	-1.43	.162
8	Oct. 15-Apr. 15 precipitation accumulation (cm)	-1.99	.054
9	April 15-July 1 precipitation accumulation (cm)	2.79	.009
10	July 1-Sept. 1 precipitation accumulation (cm)	1.22	.231
12	Ambient air temperature on sampling date (°C)	2.06	.047
14	Minimum air temperature since the previous sampling date (°C)	1.35	.186

precipitation (X_{10}), Ambient air temperature on sampling date (X_{12}), Minimum air temperature since the previous sampling date (X_{14}). Four factors prolonged phenological development: Soil moisture % at 15-30 cm depth on sampling date (X_3), Soil moisture percent at 15-30 cm depth on the previous sampling date (X_6), Soil moisture percent at 46-61 cm depth on the previous sampling date (X_7), Winter precipitation (X_8).

ANALYSES FOR ARTEMISIA NOVA

Reproductive Phenology. Four environmental variables were chosen from the selection pool of variables. The variables chosen and their significance levels are listed in Table VI. The regression model calculated from this subset of variables is:

$$Y_{15} = 9.03 - .152X_5 + 1.381X_{10} - .735X_{11} + .071X_{14}$$

where Y_{15} = reproductive phenology.

The F statistic for regression was calculated to be 1.92 (not significant). The independent variables present accounted for 17.82 percent of the variability of the reproductive phenology.

Two factors promoted phenologic development: July 1 - Sept. 30 precipitation accumulation (X_{10}), Minimum air temperature since the previous sampling date (X_{14}). Two factors prolonged the phenological development. They were: Soil moisture percent at 0-15 cm depth on the previous sampling date (X_5), Fall precipitation accumulation (X_{11}).

Vegetative Phenology. Five environmental variables were chosen from the selection pool of fourteen independent variables. The variables chosen and their significance levels are listed in Table VII. The regression model calculated from this subset is:

$$Y_{16} = 4.369 - .032X_3 - .093X_4 - .059X_6 + .610X_{10} + .027X_{14}$$

where Y_{16} = vegetative phenology.

In light of the small sample size the model was highly significant when tested by analysis of variance. The F-statistic was calculated to be 6.41 ($P \leq .005$). The independent variables present in the model accounted for 61.41 percent of the variability of the vegetative phenology.

Table VI. Descriptions and significances of independent variables used in the analysis of reproductive phenology of Artemisia nova.

Variable	Description	T-value	Significance
5	Soil moisture % at 0-15 cm depth on the sampling date	-2.37	.034
10	July 1 - Sept. 1 precipitation accumulation (mm)	1.27	.225
11	Sept. 1-Oct. 15 precipitation accumulation (cm)	-1.26	.229
14	Minimum air temperature since the previous sampling date (°C)	1.60	.135

Two variables promoted vegetative phenological development: Summer precipitation accumulation (X_{10}), Minimum air temperature since the previous sampling date (X_{14}). Three factors prolonged phenological development. They were: Soil moisture percent at 15-30 m depth on the sampling date (X_3), Soil moisture percent at 46-61 cm depth on the sampling date (X_4), Soil moisture percent at 15-30 cm depth on the previous sampling date (X_6).

Table VII. Descriptions and significances of independent variables used in analysis of vegetative phenology of Artemisia nova.

Variable	Description	T-value	Significance
3	Soil moisture percent at 15-30 cm on the sampling date	-1.09	.297
4	Soil moisture % at 46-61 cm depth on the previous sampling date	-2.79	.016
6	Soil moisture % at 15-30 cm depth on the previous sampling date	-2.12	.055
10	July 1-Sept. 1 precipitation accumulation	1.56	.144
14	Minimum air temperature since the previous sampling date (°C)	1.49	.162

ANALYSES FOR ARTEMISIA TRIDENTATA

Reproductive Phenology. Six independent environmental variables were chosen from the selection pool of fourteen variables. The variables chosen and their significance levels are listed in Table VIII. The regression model calculated from the chosen variables is:

$$Y_{15} = 9.626 - .029X_1 - .044X_3 - .010X_5 - .005X_7 + .080X_9 + .029X_{12}$$

where Y_{15} = reproductive phenology.

The model was highly significant when tested by analysis of variance procedures. The F- statistic for regression was calculated as 5.92 (P= .0001). The independent variables accounted for 25.57 percent of the big sagebrush reproductive phenology.

Two factors promoted reproductive phenologic development: Spring precipitation (X_9), Ambient air temperature on sampling date (X_{12}). Four factors prolonged the phenological development: Soil temperature at 38 cm depth on the sampling date (X_1), Soil moisture percent at 15-30 cm depth on the sampling date (X3), Soil moisture percent at 0-15 cm depth on the previous sampling date (X_5), Soil moisture % at 46-61 cm depth on the previous sampling date (X_9).

Vegetative Phenology. Eight independent environmental variables were chosen from the selection pool. The variables chosen and their significance levels are listed in Table IX. The regression model calculated from the chosen variables is:

$$Y_{16} = 2.447 - .025X_3 - .008X_5 - .028X_6 + .109X_8 + .117X_{10}$$
$$+ .035X_{13} + .012X_{14} + .022X_{12}$$

where Y_{16} = vegetative phenology.

The model was highly significant when tested by analysis of variance procedures. The F- statistic for regression was calculated as

Table VIII. Description and significances of independent variables used in the analysis of Artemisia tridentata reproductive phenology.

Variable	Description	T-statistic	Significance
1	Soil temperature at 38 cm depth on the sampling date (°C)	-1.42	.159
3	Soil moisture % at 15-30 cm depth on the sampling date	-2.57	.012
5	Soil moisture % at 0-15 cm depth on the sampling date	-1.32	.189
7	Soil moisture % at 46-61 cm depth on the previous sampling date	-1.08	.281
9	April 15 July 1 precipitation accumulation (cm)	1.37	.175
12	Ambient air temperature on the sampling date (°C)	4.18	.000

Table IX. Descriptions and significances of independent variables used in the analysis of Artemisia tridentata vegetative phenology.

Variable	Description	T-statistic	Significance
3	Soil moisture % at 15-30 cm depth on the sampling date	-1.73	.088
5	Soil moisture % at 0-15 cm depth on the previous sampling date	-1.42	.159
6	Soil moisture % at 15-30 cm depth on the previous sampling date	-1.95	.055
8	Oct. 15-April 15 precipitation accumulation (cm)	1.40	.166
10	July 1 - September 1 precipitation accumulation (cm)	2.04	.045
12	Ambient air temperature on the sampling date (°C)	3.89	.000
13	Maximum air temperature since the previous sampling date (°C)	3.61	.001
14	Minimum air temperature since the previous sampling date (°C)	1.25	.221

15.77 ($P \leq .0001$). The independent variables accounted for 57.88 percent of the big sagebrush vegetative phenology.

Five variables promoted vegetative phenologic development. They were October 15- April 15 precipitation accumulation (X_8), July 1-Sept. 1 precipitation accumulation (X_{10}), Maximum air temperature since the previous sampling date (X_{13}), Minimum air temperature since the previous date (X_{14}), Ambient air temperature on sampling date (X_{12}). Three factors prolonged the phenologic development: Soil moisture % at 15-30 cm depth on the sampling date (X_3), Soil moisture % at 0-15 cm depth on the previous sampling date (X_5), Soil moisture % at 15-30 cm depth on the previous sampling date (X_6).

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